Technology Enhanced Learning Innovation, TEQSA Threshold Standards and Australian Higher Education: A Developmental Phenomenographic study of Educational Designer's understandings and experiences.

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This thesis is submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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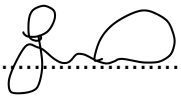
B.Sc, D. Ed (Sc. Ed), M.Ed.

This thesis results entirely from my own work and has not been offered previously for any other degree or diploma.

Signature  .....

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Abstract

In this Developmental Phenomenographic study, twenty-six Educational Designers/Developers' (EDs') understandings and experiences of Technology Enhanced Learning (TEL) innovation both generally, and whilst working under TEQSA Threshold Standards (TS), were investigated with the aim of illuminating how TEL innovation is shaped within Australian Higher Education (HE) contexts. I employ Feenberg's (2005, 2006) Critical Theory of Technology as a lens for exploring EDs' understandings of TEL innovation and the socio-political environments in which HE sits.

The variances in understanding and experiencing is illuminated by four outcome spaces, with each showing understandings and experiences in a hierarchical manner, and with higher levels subsuming understandings and experiences of lower levels. In outcome space one, EDs' understandings of TEL innovation in general were labelled as: Maintained; Enhanced or; Transformed; whilst in outcome space two, their experiences of TEL innovation on-the-ground were labelled as Sustaining, Constraining, or Influencing. In outcome space three, EDs understandings of TEL work under TEQSA TS were Static; Narrow or; Broad; whilst in outcome space four, their experiences were: Maintained; Constrained; Supported or; Encouraged. The inclusion of a referential aspect of Support suggests that EDs believe that support via projects or strategies offer additional reinforcement when it comes to innovating under TEQSA TS.

Further presented is an analysis of: outcome space one cross referenced with outcome space two; and outcomes space three cross referenced with outcome space four. Variations here were attributed to the EDs general understanding of TEL innovation and the socio-political influences that they encounter on a daily basis.

Overall, it is suggested that the variation of EDs' experiences of TEL innovation under TEQSA TS were similar to that of generally innovating. One difference was that institutional projects and strategies were seen as beneficial to innovating with TEL and working under TEQSA TS, whilst outside of this, they were to some extent seen as constraining innovations. The study also constructively critiques the concepts of pedagogy before technology; evidence and best practice, which were

repeatedly mentioned by EDs as underpinning their understandings and conceivably shaping their experiences of TEL.

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Publications derived from work on the Doctoral Programme

Module 1 (EDS821) Research Methods in Education and Social Science Settings:

Distance Education Student's Perception of E-learning

Module 2 (EDS822) The Development of Professional Practice Developing:

Courses for an E-learning Environment: A case study of novice e-learning course developers and their professional development needs

Module 3 (EDS823) Researching Technology Enhanced/Networked Learning, Teaching and Assessment:

Using Discussion Forums for Assessment within a Networked Learning Environment: A case study of tutors' experience and possible support

Module 4 (EDS824) Groups and Communities: Researching Technology Enhanced / Networked Learning Communities:

Curriculum Framework Considerations for Introducing Networked Learning within a Career-focussed Higher Education Institution: A case study of the Polytechnic of Namibia.

Module 5 (EDS825) Globalization and Interculturality:

Designing E-learning Environments to Enhance Work-Integrated Learning within an Employability Agenda: A desktop study for the Polytechnic of Namibia.

The research paper for Module 4 was presented at the 8th International Conference on Networked Learning held in April 2012 at the Maastricht School of Management, Netherlands.

List of abbreviations

ACODE	Australasian Council of Open, Distance and E-Learning
ASCILITE	Australasian Society for Computers in Learning in Tertiary Education
ASET	Australian Society for Educational Technology
AETM	Association for Audio-visual & Education Technology Management
ED	Educational Designer/Developer
HE	Higher Education
HEFCE	Higher Education Funding Council, England
HERDSA	Higher Education Research and Development Society of Australasia
OECD	Organisation for Economic Co-operation and Development
TEL	Technology Enhanced Learning
TEQSA	Tertiary Education Qualifications and Standards Agency
TS	Threshold Standards
QAA	Quality Assurance Agency

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Chapter 1 Introduction and Background to the Study

> *We cannot solve our problems with the same thinking we used when we created them.*
>
> Albert Einstein.

1.1 Introduction

Educational Designers'[1] (EDs) work on a variety of activities that traverse both professional staff and academic roles, thus contributing to a re-orientation of working patterns in higher education (HE) (Whitchurch, 2009). They are also seen as major initiators and enablers of innovation in HE Technology Enhanced Learning (TEL) (Hannan, 2005; Shephard 2004) and as key collaborators, accelerators and connectors across institutes (Obexer & Giardina, 2016). However, a change in how Australian HE academic standards are measured, and the need to conform to national standards, has created large spread concern specifically regarding the possible effects on EDs work on innovation with TEL.

In this Developmental Phenomenographic study, the aim is to find out the range of ways that EDs understand innovation in TEL and how they experience this whilst needing to comply with the Australian Tertiary Education Quality and Standards Authority (TEQSA) Threshold Standards (TS). The variations in meaning will be used to suggest the characteristic ways of innovating under such conditions and circumstances (Laurillard, 2013). Such variations and their characteristics may also inform EDs practice regarding the varying personal, social, economic and political factors that can influence innovation in varying TEL environments.

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[1] Educational Designer is just one type of title given to the participants I include in this study. Other titles include Educational Developer, Educational Technologist, Learning Designer, Instructional Designer, Courseware Developer, eLearning Designer, or Learning Technologist. The main consideration for their participation is that their work focuses on supporting academics with Technology Enhanced Learning within Higher Education (See 1.2.3)

1.2 Setting the scene

1.2.1 The Tertiary Education Quality Standards Agency in Australia and responses from universities.

In Australian HE circles, growing concerns and greater uncertainty about quality and related academic standards led to the Australian Government stepping in to undergird the Australian education system. In December 2008, the Review of Australian Higher Education, commissioned by the Federal Government and otherwise known as the Bradley Review, recommended opportunities for further expansion of Australian HE, but with greater levels of accountability (Bradley, Noonan, Nugent, & Scales, 2008). It specifically emphasised the need for greater clarity and more explicit demonstration of academic standards. “Australia must enhance its capacity to demonstrate outcomes and appropriate standards in HE if it is to remain internationally competitive and implement a demand driven funding model” (p. 156). The Bradley Review identified the establishment of measures of academic standards and mechanisms to better demonstrate institutional processes for setting, monitoring and maintaining standards. A key recommendation was to establish a national regulator, which in 2011 became known as the Tertiary Education Quality and Standards Authority (TEQSA). TEQSA replaced the Quality Assurance Agency (QAA), which was a state-based regulatory approach in operation for many years. TEQSA’s responsibilities include, registering HE providers; non-self-accrediting provider courses; assuring quality measured against externally set standards and; reducing risk by monitoring institutional performance against a number of measures. TEQSA “regulate all HE providers and ensure that providers

and their courses meet the Threshold Standards" (Australian Government, 2013a, p. 1)[2].

Qualification Standards are part of the Threshold Standards, with TEQSA requiring all HE awards at Levels 5-10 of the Australian Qualifications Framework (AQF) to meet the corresponding specifications in the AQF (Australian Qualifications Framework Council, 2013). TEQSA is merely the monitoring and enforcement agency, 'whilst the AQF Council develops and maintains the AQF national policy. Under TEQSA, it was envisaged that Australian institutions would be accountable for explicitly demonstrating their academic standards and that these standards be benchmarked against 'national standards'.

In response to the TEQSA TS, Shah and Jarzabkowski (2013) noted that:

> *One of the key changes in Australian higher education quality assurance is the shift from a 'fit-for-purpose' approach to quality assurance to a compliance-driven approach using an externally developed set of standards monitored by the national regulator, which has legislated powers to place sanctions on universities and other providers for non-compliance (p. 96).*

This change in quality assurance measures has upset the HE community and there have been loud and public misgivings regarding its introduction. One concern is that the standards may affect the autonomy of tertiary institutions and hence their ability to set their own, more flexible standards, which in turn "may restrict innovation and good practice" (Thompson-Whiteside, 2012, p. 35). A university vice-chancellor stated that "overzealous regulation and red tape was strangling innovation and diversity while adding costs with no discernible benefit" (Le Grew, 2013, p. 28).

[2] In January 2017, new national standards were introduced to guide HE in Australia: 'Higher Education Standards Framework (Threshold standards) 2015'. This study is based on the 2011 TEQSA TS.

Another asserted that “the national regulator is so retrospective in its view of a university as a bricks-and-mortar, on campus experience, it risks obstructing innovation in online delivery and therefore jeopardising the nations competitiveness” (Hare, 2012, p. 5). And yet another senior manager of a university research group has maintained that TEQSA may stifle universities want to take on and experiment with digital delivery and may hold back innovation undermining future quality (Jump, 2012). In response to the imposed standards and misgivings of prominent people in the HE sector, a well renowned professor and former vice chancellor noted that the HE sector needs to be of high quality, and sustainable, but it also must be agile and free to respond in a dynamic world. Without it, innovation will be limited (Hare, 2013).

Shah and Jarzabkowski (2013) supported these sentiments by writing that, in Australian contexts, innovation may be limited by increased regulation by bodies such as TEQSA, and when also coupled with declining funds for universities. Studies in other countries such as the UK also show dissatisfaction with having to account to national policies. Schneckenberg (2009) proposes that, in a European context, it is the “structural peculiarities of universities and cultural barriers, which are deeply rooted in the academic community” (p. 414) that are to blame for limited TEL innovation. He links the issue to the introduction of similar quality assurance standards across the European Higher Education area and to the reduction of public investment in higher education. Findlow (2008), in her UK study, also found that educators in universities perceived accountability imposed by policies as inhibiting innovation. Dobbin’s (2009) study indicated (at the time of the research), that it was harder to innovate in 2002 in the UK than previous years and that one of the prominent reasons was due to the constraints of quality assessment requirements. In terms of the quality assurance requirements found in policy, Dobbins additionally found that opinions were split about whether its overall effect on teaching and

learning had been positive or negative, and fear of the results of auditors and institutional inspections that are deterring innovation.

In contrast, Cowan (2008), believes that innovation is possible as long as it is determined *within* existing frameworks of curriculum and teaching. In terms of policies, Harley and Lawrence (2007) also think that regulation is for the public good and can enable or foster innovation. However, they further recommend the development of studies that examine how regulation promotes or inhibits TEL.

1.2.2 TEQSA Threshold Standards and their relationship to Technology Enhanced Learning

TEL and its rapid development has exposed curriculum development processes to quality assurance needs and, in doing so, many HE institutions now closely scrutinise processes to ensure quality and ensure their accreditation is maintained (Conole, Smith, & White, 2007). In Australia, scrutiny is based on the TEQSA Act, which applies to all forms of delivery including online delivery, leading to a higher education award. The TS are:

> *…a set of requirements, in the form of a legislative instrument, which need to be met by Higher Education providers. TEQSA applies the Threshold Standards, including the Qualification Standards, when accrediting courses, registering providers or renewing registration. The Qualification Standards, in turn, require providers to ensure that all their higher education awards that lead to AQF qualifications meet the corresponding specifications in the AQF (Australian Government, 2014b, p. 1).*

Self-accrediting providers, such as the established universities of Australia, were required to submit “evidence demonstrating implementation and effectiveness of self-accrediting processes including course development, course approval, course

monitoring and course review [as well as how they] comply with the AQF and professional accreditation requirements and more generally the Provider Course Accreditation Standards and the Qualification Standards" (Australian Government, 2013a, p. 2). The date for when these plans were to be in place was 01 January 2015. All newly accredited courses were also to be AQF compliant by that time.

Below are the standards used for compliance purposes:

1. Course design is appropriate and meets the Qualification Standards.
2. Course resourcing and information is adequate.
3. Admission criteria are appropriate.
4. Teaching and learning are of high quality.
5. Assessment is effective and expected student learning outcomes are achieved.
6. Course monitoring, review, updating and termination are appropriately managed.

For each of the above standards, guidelines were published that further clarified each standard (see Australian Government, 2017).

With the above background of TEQSA and the TS and their purpose in mind, I now move onto the participants that are the focus of this study, that is, the EDs.

1.2.3 The role of the Educational Designer in Higher Education settings

Gosling (2008) has speculated that in the UK, the creation of ED positions and the units they reside in were a response to, the pressures created by the massification of higher education; the decrease of funds allocated to universities by government; the diversifying student profile and; growth of educational technologies (see also

Hudson, 2009). The advent of EDs in Australia has followed similar lines, and particularly in the 1980s, as a response to increased distance education offerings. EDs numbers further flourished throughout the 1990's as a result of expanding online education (Bird, Morgan, & O'Reilly, 2007).

A great variety of position titles apply to those who work with TEL, as found through an initial scan of Australian university's staff directories. I found titles of Educational Designer, Educational Developer, Learning Designer, Instructional Designer, Courseware Developer, eLearning Designer, Flipped Learning Advisor, Blended Learning Designer, Academic Developer and Learning Technologist (see also Bird et al., 2007 and Mitchell, Simpson, & Adachi, 2017). The variation in titles are common worldwide as supported by Beetham, Jones, and Gornall (2001); Fox and Sumner (2014); K. Oliver (2010); Shephard (2004) and Soyoz (2010). In comparison, in the UK similar roles are frequently titled 'Educational or Learning Technologist', whilst in the USA, EDs are more commonly referred to as 'Instructional Designers'.

Over time, roles of EDs have changed. For instance, Allen's research (1996) indicated that prior to 1996 the majority of EDs had the title of 'Instructional Designer', and they carried out activities such as defining instructional goals, objectives and related strategies, plus editorial work:

> *Instructional Design is the systematic process of designing an instructional solution to an educational or training problem. It requires identifying causes of the problem, determining instructional objectives, and recommending or [designing] instructional materials (Rogoff (1987) cited in Allen (1996, p. 9)).*

These Instructional Designers could undertake a large range of activities, and whilst "roles could change according to their skills and abilities…these skills and abilities were not often recognised" by the people with which they worked with (Allen, 1996,

pp. 28,29). Activities done less frequently at the time were those related to using technology to design learning resources. Also, although Allen acknowledged that nobody involved in his study were called EDs, he indicated that such a title was beginning to be used more frequently.

Since 1996, the title of Instructional Designer, at least in Australia HE contexts, has greatly decreased. The HE sector in more recent times, being faced with; increasing accountability and need of better quality assurance measures (Bird et al., 2007; Seeto & Herrington, 2006); organisational transformation and; the massification of HE (Hudson, 2009), have required EDs to learn new skills and adopt technology for teaching and learning.

Changes to responsibilities over time can also be attributed to the institutions themselves; with their varying histories; orientations (Bird, 2004); needs, and differences in regional and national priorities and regulations. These have led to varying educational development enterprises and fed into diversifying position descriptions, and associated tasks or projects. What is common across time with these type of positions is that they "occupy a position between the structural and pragmatic, at the nexus of institutional strategy for teaching and learning and its practice" and that they are very much effected and influenced by institutional, technological and pedagogical factors (Hannon, 2008, p. 15).

In 2002, Bird (2004) found that a majority of Australian EDs worked in central units (hubs) that had a variety of names, which she said was a result of "the particular institution's strategic and organisational priorities, for example flexible learning centres and teaching and learning units" (p. 22). Further, she found that the EDs held a number of different qualifications, with no one qualification being more common than others, and that they did not follow any similar professional development pathways.

Today, EDs are positioned within varying university faculties or schools (e.g. School of Arts), or within specialised departments, or in various centres of the university (e.g. Learning Innovations Hub, Teaching and Learning Support, Teaching and Learning Centre) (see also Beetham et al, 2001).

The UK Association of Learning Technology see Educational Technologists being "actively involved in understanding, managing, researching, supporting or enabling learning with the use of Learning Technology" (ALT, 2017). In the US, Instructional Designers have responsibilities in categories of designing instructional materials and courses; managing efforts of the faculty, administrative, IT and related others; training faculty to leverage technology and implement pedagogy effectively and; supporting faculty pedagogically and technically (Intentional Futures, 2016). However, Instructional Designers overtly recognise their role in improving student learning outcomes (ibid.).

In terms of what EDs are responsible for, in Australia in 2007 they were found to work within a number of varied professional and institutional contexts and designing, developing and producing educational programs and materials across a range of media (Bird et al., 2007). More recently, Obexer and Giardina (2016) research on Learning Designers across six Australian Universities described such professionals as being "at the nexus of technology and pedagogy". Figure 1.1 below represents the key responsibilities and in referring to these staff members as key collaborators, accelerators and connectors.

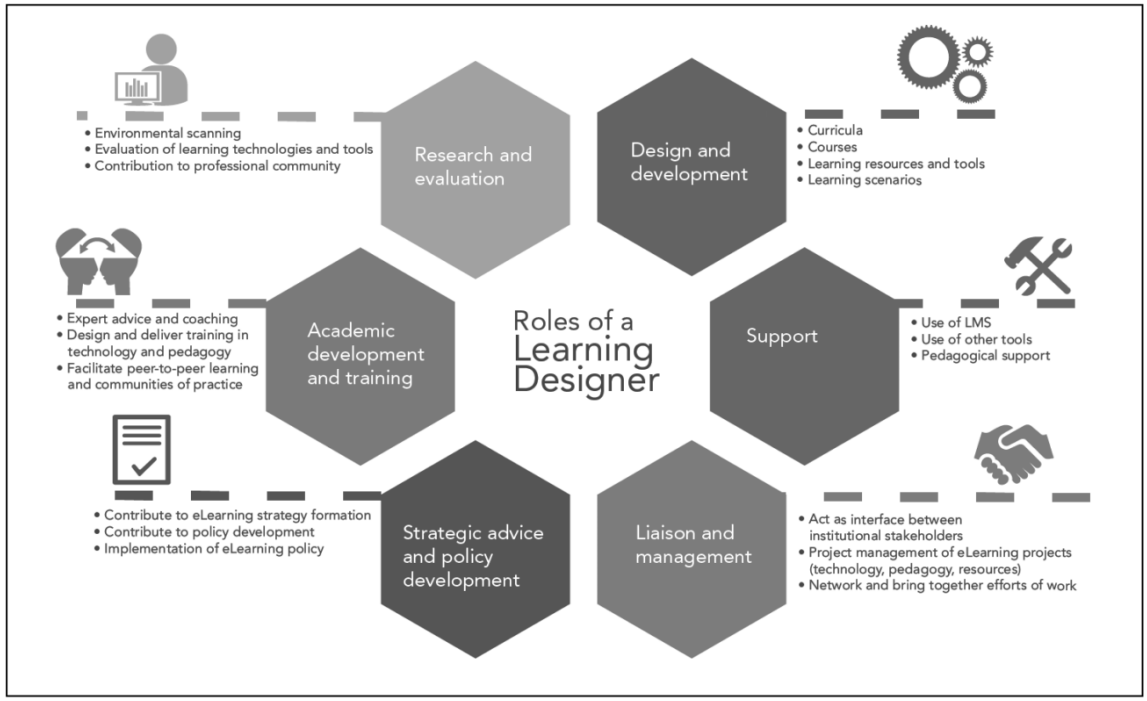

Figure 1.1 Roles of a Learning Designer (Obexer & Giardina, 2016, p. 141)

EDs in Australian HE have learning technology work at the core of their professional identity, that is, they have roles that include elements of support and guidance of teaching and learning (curriculum development and practice), developing resources and artefacts by using TEL strategies and 'tools', training staff in use of technologies, offering workshops on identified needs, undertaking administrative duties, advising and/or supporting schools/faculties/committees and so forth in educational technology matters, managing work, staff and/or projects, evaluating educational technology tools and processes, and designing and developing digital environments (Bird, 2004; Mitchell et al., 2017; M. Oliver, 2002). Also, in a few cases, EDs do research within TEL environments, however their engagement in research on teaching and learning in general, much like the UK, has been declining over time (see Gosling, 2008; Jones & Wisker 2012). However, according to Mitchell et al. (2017) research on ED job advertisements from 2012 to 2017, the most common practices listed were:

- training;
- supporting or advising;
- researching, and/or evaluating technologies and teaching practices;
- designing and/or developing curriculum, courses and learning resources;
- leading or managing.

They further stated that there was “significant overlap and/or disconnection between the current titles of…TEL worker roles and their expected practices…[and] that these titles might not present great significance to HE institutions” (Mitchell et al., 2017, p. 150). These kind of positions have also been said to as having ‘third space’ roles, the kind which offers expertise and approaches drawn from both professional and academic spheres of activity, and ‘contribute to a re-orientation of working patterns in higher education” (Whitchurch, 2009, p. 417). However, they are also challenged by the formal structures and boundaries that make up institutions (ibid.). Not surprising therefore, there have been questions of where EDs are best placed, as the knowledge, skills and competencies required of EDs are not solely professionally based, but also cross over into academic territory thereby “requiring competencies in change management, education, leadership, learning design, research, staff development and techne´” (Shurville, Browne, & Whitaker, 2009, p. 202).

What’s more, personal qualities such as varying knowledge, skills, competencies, experiences, cultural backgrounds and interests, and how the EDs view themselves, and their world, may also influence how an ED works. For example, EDs agency and motivation, particularly their self-efficacy (Cho, Cheng, & Hung, 2009), innovativeness, perseverance, and flexibility are seen as important for a person to adopt and continue to use technologies (Oly Ndubisi, Gupta, & Ndubisi, 2005). In this study, this can be seen in relation to, in the first instance individual and institutional contexts and, in the second instance, as affected by the TEQSA TS.

The above background information guided me to investigate the understandings and experiences of EDs and their work with TEL innovation and further, whilst complying with TEQSA TS.

1.3 The research questions

With the above introduction and orientation in mind, I developed this study around the following four research questions:

1. How do Educational Designers understand TEL innovation?
2. How do Educational Designers experience innovation with TEL?
3. How is TEL innovation experienced under the TEQSA Threshold Standards?
4. What information and ideas gained from this study can inform Educational Designers and the TEL innovative work they do?

Included in Question three was the notion of EDs work under TEQSA TS. I specifically wanted to find out what they do to contribute to improving teaching and learning quality. It also allowed the ED to inform me if they didn't undertake work related to TEQSA TS. This proved valuable when it came to analysing data related to this question, and I could identify where data would, and would not be useful (see Chapter eight). Further, as related to the nature of the research questions, I employed a Developmental Phenomenographic approach, which is discussed in more detail in Chapter three. The conceptual lens that took to analyse data and discuss findings is further outlined below.

1.4 A discussion of Feenberg's Critical Theory of Technology underpinning the study

Over time, there has been a general belief that technology will solve many educational problems, particularly as it becomes more 'intelligent' and 'sophisticated'. Such perspectives view technology as operating autonomously and having abilities that stand independently and above those of humans. However, it may not be the

technology per se that shapes education, rather it may be human ingenuity and creativity that is influencing socio-political environments and in turn, working to advance particular technological developments and applications in educational settings (Hedberg & McNamara, 2002).

This is the basis of a theoretical stance that Feenberg (Feenberg, 2002, 2005, 2006) calls 'Critical Theory of Technology'. Feenberg's theory came about because of his rejection of theories such as Instrumentalism, Determinism and Substantivism and their views of technology, and which I summarise from his works below.

Instrumentalist theories, conceived and developed by theorists such as Comte, Mach, Duhem and more recently Dewey, view technologies as value free (Feenberg, 2006). Technologies become simple 'tools' that people use as they see fit, and without any thought of inherent purpose. This theory has a particular position that technology is able to catalyse efficiency. It is a very anthropocentric view, with our environment being 'there for the taking'. Life under this view is based on an "unending progress toward fulfilment of human needs through technological advance" without any thought of what catastrophes technology can bring (Feenberg, 2006, p. 3).

Determinism is also viewed as being neutral, but it too perceives technology as having an ability to catalyse efficiency. Again, technologies are 'tools', but in this case, often as being extensions to human faculties. Humans are required to adapt to technology as it is proposed that technology embodies modernisation and enables us to progress.

Substantivism's theoretical position is that technology is value-laden with values specifically directed toward the pursuit of power and domination. What's more, technology is considered autonomous, here to stay and cannot be stopped. We control technology, but technology also controls us. Being such, it has the potential to

cause great societal harm. This theory's most famous proponent was Martin Heidegger.

Feenberg's Critical Theory of Technology has similarities to Instrumentalism and Substantivism in that, much like Instrumentalism, technology can be somewhat controlled and like Substantivism, that technology is value-laden. However, in Critical Theory, technology, whether artefacts or processes, are the result of people. In order for them to exist, a human must first create it. In this way, technologies are not separate from society, rather they embody society, with "the values embodied in technology [being] socially specific" (Feenberg, 2006, p. 6). Accordingly, technologies are developed within particular contexts, by people with particular wants or needs, through specific practices, and with all of these areas being influenced within societal, economic and political spheres. Within these spheres lie issues of power and control that "impose designs that narrow the range of interests and concerns which can be served by the normal functioning of technology" (Grimes & Feenberg, 2013, para. 10). This leads to an issue "of the ways in which technological design and development come to serve as the material base of a distinctive social order" (ibid.). Accordingly, technology is a product of our social, economic and political environment, with technology being both shaped by these environments and in turn shaping future environments.

Technology is further conceived in this theory as being somewhat controllable but there is also recognition of the possible "catastrophic consequences" technology development could bring to our society. For example, because technology is not neutral free, it can serve to reproduce what it is supposed to transform, so if it is "biased toward a particular hegemony, all action undertaken within its framework tends to reproduce that hegemony" (Feenberg, 2002, p. 57).

There is however, a belief that advancing society is a possibility if “we could tame technology by submitting it to a more democratic process of design and development” (Feenberg, 2006, p. 6). What’s more, technologies are not considered as tools, but are frameworks for ways of life “[opening] up the possibility of reflecting on such choices and submitting them to more democratic controls” (p. 7).

As such, although there may be many a difficulty in democratising technological development, “Critical Theory [is] above all dedicated to interpreting the world in the light of its potentialities” (Feenberg, 2005, p. 63). Essentially, “[t]echnology can frame not just one way of life but many different possible ways of life, each of which determines a different choice of designs and a different range of technological mediation” (Feenberg, 2006, p. 6).

In this study, a critical approach to technology frames discussions of innovation with TEL and is related to issues such as empowerment, social justice, equality and democracy (Selwyn, 2010). Much like Selwyn, I aim in this study to move away from a means-end way of looking at how best to use technology to enhance learning, and to rather focus on how innovation in TEL is actually carried out in educational contexts. Also, “how individual learning technologies fit into wider socio-technical systems and networks, as well as what connections and linkages exist between educational technology and macro-level concerns of globalization, the knowledge economy and late modernity” (p. 71). This will go some way towards Selwyn’s issue of the gap of research that depicts how and why educational technologies are used in ‘reality’ (Selwyn, 2010).

1.5 Motivation for the research

The motive for the research topic and resulting enquiry was due to several reasons. Firstly, having worked with EDs for many years and experiencing both TEL successes and failures within my own context, I was curious to know more about the

general nature of TEL innovation across Australian HE. When researching for possible areas to investigate, I was guided by researchers who, having done literature reviews or by conducting thorough investigations into TEL innovation, had indicated that often research focussed on questions that had already been asked, and there was a need for investigations into *how* TEL innovations occurred in real situations. Such studies focus on less visible influential factors that are significant for TEL innovation practices but are not very often discussed. In short, I wanted to understand how TEL innovations are politically and socially constructed and thus how TEL innovation is undertaken or not undertaken. The understandings of the EDs were also an important aspect of the research as they further illuminated EDs knowledge and skills that shape TEL practices. I hoped that the research findings as shown through the outcome spaces, which reveal EDs experiences; and the variable but hierarchical understandings, would be both interesting and useful to the ED community.

1.6 Contribution to new knowledge

Although there have been numerous studies on EDs and technology within Australia, as far as I know there have not been any done on the variances of understandings they have about TEL innovation and how they experience it under TEQSA TS. It therefore provides universities with a clear account of how TEL innovation is understood and experienced by EDs, which is especially useful when wanting to move forward on innovative ideas and activities. Secondly, when considering the focus of this study involving EDs; their understandings and experiences of TEL innovation; aspects of the TEQSA TS and; the Australian HE context, I am confident that there is nothing that combines all of these elements in the one study. As such, this study contributes to topics of research on, what Selwyn calls, “the state of the actual” rather than on “what should happen, and what could happen” (Selwyn, 2008, p. 83) with technologies in educational settings. The important insights of TEL

innovation given by this study will inform universities of areas that should be reviewed, such as, the significance of the ED role and the need for deliberations on avenues to transform both pedagogy with technology if innovative teaching and learning is to occur.

Moreover, I am convinced that the Developmental Phenomenographic approach taken, which aims to illustrate how people experience some aspect of their world whilst inspiring and prompting participants and those that work with them to change the way their world works, also adds uniqueness as, again, as far as I know, there are no comparative studies. The uniqueness is also supported by use of Feenberg's Critical Theory of Technology, which I have purposely made apparent as the theoretical lens used to examine TEL, and further due to Kirkwood and Price's (2014) literature study, which showed that there were few research papers that based their examinations on theoretical models. Their point is that "[a]cademics and managers need a clear articulation of what is meant by TEL in higher education to develop a better understanding of achievements…if research is to inform future practices in teaching and learning with technology to maximum effect" (p. 25). This study therefore offers useful ideas for EDs regarding other ways of seeing and being, and a critique of some of the socio-political forces that shape what gets done and why, whilst also providing a clear account of the models employed to do so.

1.7 Structure of the thesis

The chapters proceeding this are outlined as follows:

Chapter two provides a review of literature related to educational technology; pedagogy and technology; technology enhanced learning; technology enhanced learning innovation in HE contexts and lastly; the challenges that EDs have in innovating with TEL in HE settings.

Chapter three discusses the philosophical groundings for the study and outlines the; Developmental Phenomenographic approach and reasons for its choice; the research design; analysis of the data and finally; addresses research trustworthiness and rigour.

Chapter four discusses the findings of the study and outlines the employment of outcome spaces. This chapter starts by discussing how the outcome spaces were developed and then presents the findings from outcome space one, related to the EDs understandings of TEL innovation, along with illustrative quotes.

In **Chapters five, six and seven,** findings from outcomes two through to four are presented consecutively, along with illustrative quotes. The Chapters deal with EDs experiences of innovating with TEL; their understandings of working under TEQSA TS and; their experiences of innovating with TEL under TEQSA TS.

Chapter eight takes the findings from chapters five and seven (the referential aspects) and cross references them, to present an overall picture of how TEL innovation occurs generally and; under TEQSA TS. I also present a summary of the key findings arising from this activity.

Chapter nine unpacks the key understandings and experiences that were unearthed during the analysis process and constructively critiques some of the underpinning beliefs that EDs have regarding innovating with TEL. I also offer ideas and other

ways of seeing to inform EDs of perhaps, of the taken for granted ways that direct or guide their innovation work.

In **Chapter ten**, I re-visit the aim of the study and the key findings to demonstrate that I have met what I set out to do, and that the research questions were able to be satisfactorily answered. I also discuss the use of Feenberg's Critical Theory of Technology and its value to the study. Further, I outline limitations of the study and finally; look at directions for future research.

Chapter 2 Orientation to Technology Enhanced Learning Innovation

> *The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore, all progress depends on the unreasonable man.*
>
> George Bernard Shaw.

2.1 Introduction

In the previous chapter I provided a background on the HE TEQSA TS setting, the roles of EDs in HE, the research questions and a discussion on the Critical Theory of Technology, which is the theoretical lens that underpins discussion. In this Chapter, I provide a more detailed orientation to the elements that make up TEL innovation generally, and TEL innovation in HE Australian contexts. I also discuss the challenge that EDs face with innovating with TEL in HE contexts. This Chapter will orientate the reader to how TEL innovation is conceived and how it is a challenge for EDs to work within the Australian HE setting.

2.2 Technology Enhanced Learning innovation: Defining what 'it' is

Years of research in TEL technology has us believe that technology is changing both what we need to know, and how we come to know it (Bates, 2010; Laurillard, 2008b). Yet educational practitioners tend to perpetuate the idea of pedagogy needing to come before technology (for example see Ascough, 2002, N. Green et al, 2010, Watson, 2001) influencing both the concept and practice of TEL innovation. To examine how TEL innovation is understood by EDs in this study, and because technology permeates all areas of this study, a formal definition of technology is provided:

> *…the branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society, and the*

> *environment, drawing upon such subjects as industrial arts, engineering, applied science, and pure science (Technology, 2017).*

Within this study, the emphasis is on the interrelation of technology with all aspects of society, but most importantly and in line with the Critical Theory of Technology, I take the stance that it "could it be more than one thing, and instead, many things simultaneously: a driver of change, [an enhancement], a tool, an approach [with] what it is…always in relation to other people and things" (Enriquez, 2009, p. 397). Further, I follow Enriquez's notion that developments with TEL are affected both by the TEL intervention itself, but also by the specific contexts in which it is being enacted, and that "as it becomes installed, distributed and accessed…within specific localities, it enacts multiple ways of working: it works *with*"…and that TEL enactments "are coordinated in specific forms locally" (Enriquez, 2009, p. 385). Accordingly, the specific nature of TEL innovations within the EDs contexts have been influenced by their contexts as well as influencing future developments and uses. This poses a challenge in that EDs and their accounts of innovation with TEL under the TEQSA TS must also "be constructed and socially negotiated [with the result that it may be difficult] to claim unproblematic, direct access to the 'true nature' of technology" (M. Oliver, 2011, p. 383). The intention however is not to get one 'true' sense of TEL innovation under TEQSA threshold standards, but rather a multitude accounts of it under specific contexts, and to do so via credible empirical research, in other words, "[i]t simply means that if we propose a socially constructivist account of learning, then our explanations of this should also be understood as socially grounded accounts" (M. Oliver, 2011, p. 382).

Thus, understanding the concept of Educational Technology and TEL is invariably founded on varying comprehensions of education, technology, and enhancement. As Bigum (2000) notes, these understandings, and how practitioners theorise associated aspects, will inform the characterisations and assumptions related with

each concept and their use. The next sections will provide an introduction and orientation to Educational Technology, TEL, pedagogy of TEL, and TEL innovation to both frame the study and to position research findings within the conceptual mindset of a Critical Theory of Technology.

2.2.1 Understanding Educational Technology

Educational Technology is recognised as a field of study both nationally and globally (Czerniewicz, 2007). Yet, "the thinking behind the technology and the terminology used to describe the undertaking has changed considerably over time" (Hedberg & McNamara, 2002, p. 111). Consequently, it has strong links to other related fields such as instructional technology, distance education and computer based learning (Hedberg & McNamara, 2002), according to the educational technology trend at the time.

With such changes over time, the theorising of what Educational Technology 'is' is difficult to pin down, particularly as it is considered a nebulous field with an array of confusing ideas of the objects of study, who its audiences are and what delineates the operations of the field (De Vaney & Butler, 1996). Specifically, as people view the concept differently in different contexts, in research it is often haphazardly defined, ill-applied and deemed all-encompassing (Veletsianos, 2010). Hence, Guri-Rosenblit (2009) has called it the "Tower of Babel Syndrome", with there being confusions of language use and an inability to clearly and succinctly delineate roles and functions. This has resulted in disagreements about "the extent to which [the field of Educational Technology] is coherent, contained and bounded" (Czerniewicz, 2007, p. 25). Effects from these confusions can be felt through the often ill-informed or conflicting decisions made regarding the value and use of educational technologies ranging from the individual educator through to the institution level and vice versa.

The conundrum also applies to the categorisation of educational technologies. For example, according to Salmon (2010), educational technologies can be seen as being either core or peripheral, with the core technologies being those that support core institutional activities and are used ubiquitously across the university. These core educational technologies require a large resource investment, (whether it be initial funding or ongoing costs, time for embedding and ongoing maintenance, or similar) and when no longer useful or deemed outdated, require university wide planning to replace or dispose of them. The institute does not consider these technologies to be high risk. On the other hand "[p]eripheral technologies are not mainstreamed or centrally supported by the university…[and]…they come in and out of use typically driven by an individual academic, researcher or – nowadays – students" (Salmon, 2010, p. 32). Peripheral technologies are considered disruptive but are important for innovation because they can stimulate improvement through change. Bigum and Rowan (2004) describe similar approaches as being either corporate or maverick types. Corporate approaches are based on policies and employ whole of university strategies to support institution wide adoptions, for example in the case of Learning Management Systems. The incentive for corporate approaches may be that of improving teaching and learning, however may be more so driven by economies of scale, generating revenues and possibly the need of 'staying ahead of the game' or 'keeping up with the Joneses' in a national and global marketplace (Bigum & Rowan, 2004). A maverick approach is employed by an individual, where resources are custom-built, possibly by the individual her/himself. These maverick strategies are not deployed at a university wide level and often are not supported in any major way by the institution (ibid). Maverick approaches are often led by pioneers within a faculty/school/unit who have a real interest and enthusiasm for technology, and can be seen as champions of technology within the university. In core/peripheral or corporate/maverick approaches, there are different values (as related to needs) placed on particular educational technologies and uses

may occur due to different reasons. The point is, understandings about educational technology, how best it can support teaching and learning and for what purpose, may influence what 'gets done', 'why it's used' and its long-standing ability to be sustained.

When applying this idea to research about Educational Technology, a recent review of published papers in a range of journals (Latchem, 2014), has thrown up understandings of educational technology as firstly being tantamount to that of 'tools', for example computers, handheld devices (tablets, mobiles etc.), with the internet as 'tools' for educative purposes. Secondly, educational technologies are related to a variety of encompassing issues such as social networking, mobile learning, instructional design and open education resources (ibid.). Veletsianos (2010) also presents Educational Technology as that of tools but also relates them to "concepts, innovations, and advancements [that are] utilized in diverse educational settings to serve varied education-related purposes" (p. 3). The Association for Learning Technology regard them as "the broad range of communication, information and related technologies that can be used to support learning, teaching, and assessment" (ALT, 2017). The tools are not viewed as a means to an end but rather to facilitate learning (Phillips, 2005).

Another way of looking at the concept is through theorising its use, for example "educational technology…is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources" (Januszewski & Molenda, 2008, p. 49). Or educational technologies are simply considered as being "developed and intentionally deployed for formal learning" (Dror, 2008, p. 216).

Nationally, The Australian Society for Educational Technology identifies it deterministically as instructional technology and regards it as thus so: "the

development, the plan, execution and assessment of substances, processes as well as systems [to] enhance the procedure for education and to accomplish successful results" (ASET, 2017). This is a very linear and naïve thought process, where educational technology can be planned and executed to meet pre-determined desired educational enhancement outcomes, that is, A+B=C.

2.2.2 Understanding technology and Technology Enhanced Learning

Listing all the different technologies and their 'limitless' functionalities that may assist, enhance or transform learning, particularly in this digital age, is challenging. This is especially so as new technologies emerge virtually daily, thus contributing to an ever expanding 'wish list'. Consequently, because of the different technologies that are used for educational purposes, as well as the different learning materials and different learners that factor into the TEL equation, finding a definition of TEL that suits all can also be tricky (Dror, 2008).

What's more, Selwyn (2008) purports that TEL in education takes place within specific social, cultural, political and economic contexts. This resonates with my theoretical stance on technology in general, with the differing contexts also needing to be considered as a 'one size fits all' global definition may not be suitable in Australian contexts (see also Cox, 2008).

Contributing to this discussion, and similar to Educational Technology, different versions of TEL exist over time and in different locations with the result that TEL has been known by a number of terms including: learning technology; online education; computer-based learning; e-learning; instructional technology, distributed learning, mobile learning, hybrid learning to name just a few (Bayne, 2014; Guri-Rosenblit, 2009; Guri-Rosenblit & Gros, 2011). However, TEL has recently become an accepted term in both Australian and UK contexts (see ACODE, 2014, Australian Government, 2016b, Bayne, 2014, HEA, 2017).

Noting the definition of technology discussed earlier, in terms of ‘enhance’, the Merriam-Webster online dictionary defines it as to “heighten, increase; especially: to increase or improve in value, quality, desirability, or attractiveness” (Enhance, 2017). The combination of both terms in the context of education would have ‘technology enhanced’ as being the use of technical means to improve teaching and learning in some way or means. Such improvements have been said to possibly occur at three different levels, and as related to the type of intervention:

1. “efficiency (existing processes carried out in a more cost-effective, time-effective, sustainable or scalable manner)
2. enhancement (improving existing processes and the outcomes)
3. transformation (radical, positive change in existing processes or introducing new processes)” (HEFCE, 2009, p. 2)

That said, in its 2005 report, the OECD concluded that ICT in higher education had more impact on administrative services than on teaching. The report additionally outlined how TEL often does not meet local needs or is relevant to cultures, and hence many strategies have failed to meet planned outcomes (OECD, 2005).

Guri-Rosenblit (2009) has talked of the gap between the expectations of technology to enhance teaching and learning and the lack of successful implementations that have had any positive change in educational environments. This is due, in part, to educational technologies not being directed at problem areas and therefore not adding any value educationally (Guri-Rosenblit, 2009; Zemsky & Massy, 2004). Problematic therefore, is viewing technology as a way of improving education without thoroughly investigating what the problem is in the first instance. Secondly, there is a need of questioning if technology provides a ‘better’ solution than that of a non-technology focussed one:

> *…we tend to start by looking at the functionality and wondering what we can do with it, rather than focussing on the problems of learning…as new technologies emerge, a new generation of researchers starts to explore what they can do, projects emerge and then, after a short while, interest fades as an even newer technology emerges (Rushby, 2013).*

Additionally, with many studies focusing on the 'technology' and in developing questions regarding how technologies can be used in education, findings often promote existing educational models rather than responding to identified teaching and learning issues (Kirkwood & Price, 2013a, 2014; Laurillard, 2008b; Westera, 2004), or in determining new ways to teach and learn with technology. This seems to be also the case in European HE sectors, with traditional pedagogical models based on teachers 'transmitting' knowledge to students (a one-way teacher led transference of knowledge) as still dominating and driving teaching and learning (Schneckenberg, 2009). Moreover, many of the research questions explored in the past have already been, more or less, answered by previous research and as such, the result is a cycle of researching obsolete questions and not learning from pre-existing lessons (Rushby, 2013; Rushby & Seabrook, 2008).

> *If we fail to learn from history of [ICT] in education and work-based learning, we are condemned to repeat it. We will continue to cycle round and round the innovation cycle, unaware of the lessons from which we could learn, making relatively little progress the questions that were being asked at that time had already been answered, at least in part, in educational technology findings dating back to the 1980s (Rushby & Seabrook, 2008, p. 199).*

Thus, it is not surprising that, even with multitudes of educational institutions taking up TEL, Daniel (2007) noted that the introduction of successful educational

technology was rare. He also attributes failures to strategies that neglect to take into account education costs, no matter what mode of delivery used, and that there is a problem with wanting to cut costs associated with education, whilst still wanting to increase access to high quality educational experiences. Using educational technology in this sense, he says, is neither economically or pedagogically sound due to increased difficulties in sustaining such strategies.

Thus, enhancing learning via educational technology may be more successful, Latchem says, when "applied to pressing needs not easily met by conventional means and systems and when scientific and other organised knowledge are applied to reducing costs and increasing volume and access while assuring quality" (2014, p. 4).

2.2.3 Understanding pedagogy, paradigm shifts and Technology Enhanced Learning

Along with the differences in terminology, the role of pedagogy has also shifted, with educational technologies seen as having potential to promote a paradigm shift from teaching to learning. This is "a new mode of learning at universities which is conceptualised as a flexible, self-organised and collaborative process" (Schneckenberg, 2009, p. 412).

Surprisingly, global research on TEL indicates that explicit statements about what TEL actually means are rare and additionally, questions have arisen on what exactly is being enhanced when technology is used for teaching and learning (Bayne, 2014; Kirkwood & Price, 2014; Price & Kirkwood, 2016). Indeed, there are criticisms of the very use of the term Technology Enhanced Learning, with Kirkwood and Price (2014) writing that "it is often taken for granted that technologies can 'enhance learning'" (p. 7). Other criticisms are levelled at its possible positivist stance, that is, the "underlying belief that digital technologies are…capable of improving education" (Selwyn, 2011, p. 713). Hence, the very purpose of using technology and the

effectiveness of it in enhancing learning is beginning to be questioned (Attwell & Hughs, 2010; Guri-Rosenblit, 2009; Kirkwood & Price, 2014; Price & Kirkwood, 2014, 2016). Price and Kirkwood (2016) also claim that technology's use is often poorly connected to pedagogy, creating gaps "between pedagogy for learning and the use of technology for learning" (p. 227). The thought is that using educational technology to enhance learning shouldn't be seen as something that will give miraculous results, especially when applied to vague educational issues.

The above perspectives on pedagogy and educational technology points to the need of further investigation into how the use of technology affects what is valued in terms of knowledge and what it means to know and learn. By doing so, new pedagogies may arise from research that open new ways of viewing the world the way we live and act (Veletsianos, 2010).

Not so long ago educational technologies were seen as a new way of doing something familiar but without a change in pedagogy, which Salmon indicated as being a first stage understanding (Salmon, 2005). Salmon's second stage involves educational technologies being used in new ways "to advance beyond what was possible in the classroom or to combine traditional approaches with [educational technology] in effective and worthwhile modes to meet new objectives and purposes of teaching and learning" (Salmon, 2005, p. 202).

Selwyn (2016, p. xi) view is that there are varying levels of change, from modest through to wholesale revolution with teaching and learning, thusly:

- improvements in learning (e.g. learning being authentic, situated or networked); or improving learners (e.g. improved engagement, better experiences; supported to learn);

- enabling educators to do their jobs better and attend to more learner needs, being responsive to societal and economical needs whilst remaining cost effective;

- transforming education process and processes, that is, shaking up the nature and form of education;

- Creating a digital revolution where the status quo is challenged, and there is a redistribution of power and control (p. xii).

This thought is extended but by Säljö (2010) who has theorised "that technology does not facilitate or improve learning in a linear sense, rather it is currently changing our interpretations of what learning is and changing our expectations about what it means to know something" (p. 56). In explanation, he says that technologies impact on our culture and communicative/cognitive activities by affecting the ways in which society develops and provides access to social memory, "that is, the pool of insights and experiences that people are expected to know about and to make use of" (p. 56). Through this new way of knowing we apply intelligent actions utilising technology and this new process is "transforming our conceptions of what learning is; our expectations of what people should master, and how human skills should be cultivated" (ibid.). This view further changes what it means to know and learn:

> *…to learn something is to be able convert information stored in the expanding external symbolic storages of our social memory into something that is new, interesting and consequential for a practice or an issue. (p. 62)*

These extended views challenge conventional ways of knowing, teaching and learning that the HE system is built upon.

2.2.4 Understanding Technology Enhanced Learning in Australia

In a National context, the Australian Council in Open, Distance and E-Learning (ACODE), which has 40 Australian Universities as members, has adopted the use of TEL and define it below:

> *It is where technology is used to enable new types of learning practices and to enhance existing learning settings (ACODE, 2014, p. 11).*

In the definition above, again technology is deterministically viewed, with technology 'used' to 'enable' new types of learning practices. However, I also draw attention to the use of the words 'new' and 'existing' as they emphasise an opportunity to enhance both new and existing learning practices and settings, albeit without clarifying what 'new' is. Accordingly, ACODE has developed eight benchmarks "to assist institutions in their practice of delivering a quality technology enhanced learning experience for their students and staff" and in doing so reflecting "an enterprise perspective, integrating the key issue of pedagogy, with institutional dimensions such as planning, staff and student development and infrastructure provision" (p. 4).

In 2013, TEQSA TS guidelines did not provide a definition of 'eLearning', but it did give guidance on eLearning and compliance with the TS (Australian Government, 2013b). In doing so TEQSA briefly outlined an approach to the regulation of higher education providers engaged in online delivery only. However, only in 2016 did TEQSA specifically mention modes of delivery using technology to enhance learning. It described TEL as:

> *…any learning that occurs through the application of electronic communications and computer-based educational technology, combined with pedagogical principles and practices that are applicable to and tailored for this purpose. This might range from augmenting*

> *face-to-face teaching with TEL in a limited way, through 'blended delivery' (with a more equal mix of the two) to fully 'online' delivery (Australian Government, 2016b, p. 1).*

This definition does not mention enhancement of learning, rather it can be any that occurs through use of technology. Further they talk about the choice of technology being 'fit-for-purpose' with regards to pedagogy and practice, which suggests enhancement of *existing* practices and is therefore different to ACODE's definition.

There are a number of further professional bodies that underpin TEL in Australia:

- Australasian Society for Computers in Learning in Tertiary Education (ASCILITE).
- Higher Education Research and Development Society of Australasia (HERDSA).
- Association for Audio-visual & Education Technology Management (AETM).
- Australian Society for Educational Technology (ASET).

As such, there is scope for those who work with technology and education in Australian universities to improve learning practices, to do so in varying institutional contexts and to share lessons learnt with others in the field.

2.2.5 Understanding Technology Enhanced Learning innovation

The word 'innovation' derives from the Latin word innovationem, noun of the action from past principle stem of innovare, which means "to change; to renew" (Innovation, 2017b). The Merriam-Webster online dictionary defines it as "the introduction of something new; a new idea, method, or device" (Innovation, 2017a). It does not determine what is meant as 'new', that is, should it be something completely new or just new to that context? (See also the definition of TEL given by ACODE above). As

one can imagine, education innovation is once again seen as a diverse and complex phenomenon:

> *…[it] concerns a mix of new developments in pedagogy and technology, it implies changes at organisational level and human functioning and it touches on fundamental concepts like progress, change, control, functionality, anticipation, mediation, acceptation, etceteras. At an institutional level, innovation of education appears a toilsome process. It always involves various parties and many 'educated' people, having their own opinions and preferences. If there is agreement at all about the need to innovate, discord about the road to innovation easily arise (Westera, 2004, p. 502)*

Some have more simplistic views of it:

> *Educational innovation is…concerned with the ways and methodologies of teaching and learning…[it is about] the use of technology to enhance our ways of teaching and learning (Boon, 2010, pp. 333-334).*

In the above concept, innovation is about enhancing teaching and learning, supposedly without involving anything new.

There are also some more complex views of education innovation. Here, the use of 'new' runs across four points, and acknowledges *improvement* of products, services, processes etc:

> *Innovation in education involves:*
>
> - *the introduction of new products and services e.g. new syllabi, textbooks or educational resources and/or*

- *new processes for delivering the educational institutes services e.g. use of ICT in e-learning services and/or*
- *new ways of organising activities e.g. ICT to communicate with students and tutors and/or*
- *new marketing techniques e.g. differential pricing of postgraduate courses*

…so that improvements occur as a result of the innovation (OECD, 2014, p. 23)

The viewpoint above again comes with a caveat that "improvements in education [are] perceived differently depending on which objective is examined or on the point of view of the observer" with "cultural values, social policies and political goals…[leading] to differing prioritisations of these different objectives" (OECD, 2014, p. 23). With this in mind, "innovations can be linked to specific social and educational objectives such as through the improvement of learning outcomes, cost efficiency, equity and public satisfaction" (p. 23). The focus in this study is on new ways of organising activities, or specifically, with innovation in the teaching and learning space using technology to improve the quality of education. This is not to say that all innovations in this space will lead to improvement (as previously inferred), but that the ultimate goal of innovating should be to affect positive change and improve teaching and learning outcomes, in whichever form or process that arises.

Hannon asserts that the common denominator of innovation "seems to be significant change and its potential to transform practice" (2009, p. 14). However, other researchers see innovation according to its "radicalness" (Gooley, Towers, & Network, 1996; Nord & Tucker, 1987). From this perspective, innovations lie on a sliding scale of "radicalness", with the two contrasting sides being named as "routine innovations" and "non-routine innovations". Routine innovations are those that cause

minor changes in products, services and processes and hence require “only minor adaptations of existing organisational routines and [so] fits within the existing norms and values of organisation members", whilst non-routine innovations are often new to the organisation and “[require] the development of completely new routines, usually with modifications in the normative beliefs and value systems of organisation members" (Nord & Tucker, 1987, pp. 41-42). Routine innovations tend to be more successful as they integrate into existing social contexts whereas non-routine are less successful because of the of new and sometimes radical organisational structures and procedures they require (Gooley et al., 1996) and which means that “more learning and unlearning must take place, and therefore the more modifications must be made in existing structure and processes" (Nord & Tucker, 1987, p. 12). Innovation may be further differentiated as being small or large scale, or simple or complex, low resource intensive to high resource intensive, high cost or low cost (Downs, George, & Mohr, 1976).

However, when delving deeper, McKenzie, Alexander, Harper, and Anderson (2005) state that there are very few innovations that are completely new to HE and that rather, universities tend to adapt existing innovations to individual contexts. Consequently, their research took a view of distinguishing “between entirely new approaches, approaches that are new to organisation or faculty, or new to the higher education system in general” (p. vii). Hannan and Silver (2000) also found that an innovation in one HE setting, may have been already in place in another HE setting. Therefore, they further clarify innovation in HE as being directly related to the innovators and their circumstances. In this regard their view was that “changes may be new to a person, course, department, institution or higher education as a whole” in order to be considered innovative (Hannan & Silver, 2000, p. 10).

What has become apparent is that Educational Technology is used mainly for service-level uses rather than for innovating teaching and learning practices (see

also Lancios & Phipps, 2015), and with institutions focusing on establishing expensive, pervading technology, which is purposefully designed to have a long life. Educators are then expected to use these technologies year after year. For this reason, Selwyn (2011) advocates taking a pessimist stance when it comes to considering using technology to enhance learning and "the pessimistic educational technologist [should adopt] a mindset that is willing to recognise—and work within—the current and historical limitations of educational technology rather than its imagined limitless potential" (Selwyn, 2011, p. 715). Similar thoughts may have led Rushby (2013) to propose that, in order for educational technologies to be of value in HE settings in the future, they should "attempt to help colleagues make the best of the current, out-dated, system...and work with those who are designing the schools of the future to make them fit for purpose" (p. 57).

However, some say that the widespread *adoption* of teaching technologies in HE should not be mistaken for educational innovation (Gunn, 2014; Hannan & Silver, 2000; Price & Kirkwood, 2014, 2016; Westera, 2004), especially if the technology is not improving teaching and learning. This may have led Price & Kirkwood (2016) to propose that learning in HE will not be advanced without a "[b]etter understanding of the role and effectiveness of technology…without a clear articulation of what is meant by learning in higher education and, as a corollary, what might indicate that an enhancement had been achieved" (p. 228). This is supported also in Kirkwood and Price's (2013b) literature and case study review, with the main findings indicating how few "published papers of TEL practices show evidence of a scholarly approach to university teaching" that is, informed by inquiry and evidence.

To further understand TEL innovation and its shaping forces, we need to understand how it is practiced by innovators in specific workplace contexts (at the micro-level), so as to uncover the wider institutional context within which innovation occurs (at the macro-level).

Hannan (2001) has categorised innovation within institutions as:

- individual innovation (such as the TEL champions, the lone-ranger or other enthusiastic and motivated people);
- guided innovation (these involve a team of staff working on projects or similar and are often funded by the institute or through government grants) and;
- directed innovation (driven by policies, strategies and similar and can be for efficiency reasons or for introducing a new institutional-wide teaching and learning strategy).

Hannan has also argued that innovation is mainly that of 'directed innovation', but that innovation is unlikely to be successful "unless the institutions concerned make such efforts to enhance the learning of their students a high priority and back this in practice as well as in their rhetoric" (Hannan, 2005, p. 984). Nonetheless, Hannan and Silver (2000, p. 976) found that there were two common strategic approaches for introducing a new technology:

- Making a technology available and actively encouraging staff to take it up (often via enthusiast led small projects funded from the centre); and
- installing a new technology and promoting its use by advertising its availability.

Both of these are approaches may be backed by a top-down strategic drive (p. 976)

However, Whitworth and Benson (2007) place a responsibility on the educational practitioner when it comes to innovating:

> *[e]ducationalists must learn about their work environment—its organisational structures and its technological infrastructures—if innovative solutions to pedagogical problems are to be found. Elearning solutions, whether developed through institutionalised*

> *INNOVATION or more 'random' events, must still be adapted to specific contexts by individual teachers. This is (lower-case) innovation; but it is far from guaranteed that its results will fall into line with strategic INNOVATION (Whitworth & Benson, 2007, p. 4)*

They emphasise the need to understand innovation as being shaped within, and by micro-level settings and within and by macro-level settings, which are the "other organisational and social spaces it encounters as it is developed and disseminated" and which in turn, gives it its emergent character (Whitworth, 2012, p. 145). Also, that innovations, and their perceived successes or failures, may be viewed differently in different contexts and that TEL innovations should "be studied not only with respect to their technical characteristics but their social ones" (ibid). I would also add that political and economic characteristics are also included.

Unfortunately, in terms of research in this area and at least in the Asia-Pacific region, "macro-level issues such as organisational change and how best to embed and sustain educational technology in national and institutional settings" (Jung & Yoo, 2014, p. 363) has largely been ignored. Further, Jung and Yoo (2014) literature review revealed that many Asian-Pacific based studies were often on a small scale and were short-term, were based on previously existing and already answered questions and additionally "did not adequately explain the ways in which technology applications facilitate learning, in which contexts and for whom and why" (Jung & Yoo, 2014, p. 361).

There are also many studies of "what should happen, and what could happen" if educational technologies are "correctly' placed within educational settings and in promoting constructivist views of teaching and learning" (Selwyn, 2008, p. 83). However, we should also be asking "questions concerning what is actually taking place when technology meets classroom", that is, the "state-of-the-actual" (Selwyn, 2008, p. 83). In doing so, some answers to the success of a technology in teaching

and learning could be found in the technical form of the innovation, some in its pedagogical qualities and some in the politics and social structures of the institutions (Whitworth, 2012). We should also be wary of the danger of "[focussing] too much on the technology and not enough on the learning" (Rushby, 2013, p. 53). These thoughts lead to further questions concerning perceived improvements by innovation, that is, whose innovation is it? And for what purpose? (Hannan & Silver, 2000). To answer such questions, would mean to uncover the political, economic and social drivers underpinning the innovation.

2.3 Technology Enhanced Learning innovation, Higher Education and Globalisation contexts

2.3.1 Globalisation, the knowledge-based society and Higher Education: An orientation

Universities are experiencing higher accountability measures and more competition from private and global institutions. Additionally, HE institutes now compete for potential national and international students; are concerned with lower government funding whilst increasing or maintaining high quality teaching and learning, and research agendas, and in improving access to HE. To do so, new approaches and strategies are being figured into universities business plans, including teaching, research and community service, in order for them to not just survive but thrive in this new age of education (Alexander, 2006).

The Australian Government purports that innovation is the heart of the economy and that it keeps Australia "competitive, at the cutting edge, creates jobs and maintains our high standard of living" (Australian Government, 2015). The Australian Prime Minister at the time said that the nation needs to be "more innovative, more agile, more prepared to take on risk and become a culture of ideas because it is the ideas boom that will secure our prosperity in the future" (Soljo, 2015). Specifically, the

Australian Government views the HE system as key to economic prosperity, with universities and colleges providing the platform for innovation, creativity and productivity (Australian Government, 2014a). In support, Bates (2010) tells us that the use of technology in HE is crucial if we are to prepare learners for a knowledge based society as 'learning prepares for and matches the world of work, leisure, and society' (p. 23). In the above cases, economic growth could be said to be predicated on the "endogenous growth theory", where technological improvements are determined "by the deliberate activities of economic agents acting largely in response to financial incentive" (Snowden & Vane, 1999). This then sees technology as a commodity for public 'consumption', rather than for pure public good (Peters, 2006).

No wonder then that the innovation agenda has been welcomed by many, but especially in the business and agriculture sectors. However, Universities have voiced concerns of whether the agenda will prioritise innovation of an economic pursuit that serve to commercialise and commodify education over other types of educational output (Wells, 2015), or over the intrinsic values that HE has traditionally upheld, with the danger of traditional values of HE becoming subservient to economic idealisms. In this respect, the purpose of higher education is being debated across sectors including government, business, community and education. The debate is fuelled by perceptions that we live in a knowledge based society with the knowledge economy driven by 'the increased knowledge intensity of economic activities, the information and communication technology revolution and also the expansion of the globalisation of economic affairs' (Stevenson, 2013, p. 28). The OECD (2005), has additionally stated that knowledge based societies are nurtured by enabling mass access to HE. However, this massification drive in HE brings unique problems, specifically with offering education to much larger groups of diverse people, and without causing over-inflated budgets for universities. Instead, it is said that HE "should be contributing to the social, cultural, economic and political enrichment of the entire

society" with HE "[serving] all society, sustaining, enriching, cultivating and critiquing the culture that underpins that society" (McArthur, 2011, p. 747). As such, there is a general view that education is not meeting the requirements of a 21st century society (Laurillard, 2008a).

2.3.2 The effect of globalisation and the knowledge-based society on TEL in Higher Education

As HE teaching and learning environments are seen to be an indicator of how adaptable a country is likely to be in response to globalisation and its ever changing influences (Laurillard, 2008b), pressure is mounting on HE institutions to meet national imperatives and thus provide possible societal advantage to the nation. This is especially so as it has been said that the universities who do not keep pace with educational technology innovations are missing out on the potential benefits such innovations may bestow on the university (Conole, 2004; Duderstadt, Atkins, & Van Houweling, 2003; Salmon, 2005; Schneckenberg, 2009; Zemsky & Massy, 2004). Consequently, universities are outracing each other to implement a large range of educational technologies and to proclaim their digital capacities and superiorities across a large range of media.

ICT is now regarded as a panacea to the massification of HE, with universities having devised numerous educational strategies in an attempt to offer high quality educational experiences to large numbers of students using economies of scale. Such strategies range from offering fully online programs/courses (with very little to no face-to-face contact with lecturers) through to flexible study type offerings, including flipped and blended learning, within targeted subjects/units. The development of MOOCs has also resulted from the need to provide education to large numbers of students whilst not having to allocate high numbers of academic staff. Universities may also have developed specific ICT strategies, ranging from a

whole of university perspective, to individual ‘educational technology champions’ who use educational technology tools that may or may not be supported by the university. Unsurprisingly, there are a plethora of technology related strategies, tools, systems, processes and resources used in online, blended, flipped and face-to-face HE environments, which can “result in a jungle of competing technical systems and business processes for [TEL and may bring] change management issues into sharp focus, ranging from early adoption of technology and new approaches to teaching and learning through to consolidation of multiple local projects into an institution-wide service” (Shurville & Browne, 2007, p. 246).

As educational technology use in HE becomes more commonplace, it is suggested that a culture change is taking place- one which encourages new developments within the area of learning and teaching, making innovation easier to occur (Hannan, 2005). On the other hand, some researchers indicate that there are still significant perceived barriers for staff to engage in innovative practice. As Gunn (2014) has noted, the unpredictable nature and “messiness” of innovations in educational technology is often in contrast with the hierarchical, structured and bounded university environments that they fall into. There is also the consideration of the nature of the university, that is, as one which promotes regulation, and in controlling what gets done and when. Therefore, “institutional-level structures, such as committees and regulations, such as assessment and validation exert strong controlling influences on their behaviour” (Stiles & Yorke, 2006, p. 257).

In terms of currency of TEL in HE, Schneckenberg has noted that “[t]echnology development tends to outpace strategic thinking and pedagogical design in universities, and the sustainable integration of [TEL] into higher education establishments remains a major challenge” (2009, p. 413). This contrasts with the perceived pressing need for innovation, for instance:

> *…[to] capture the opportunities that will be available to universities in the knowledge-driven era—or for some, even to survive—profound and far-reaching commitments must be made quickly. These commitments must be made explicitly and publicly and must be accompanied by the investments of talent and funds that can make them real. This will be a challenge in environments long acculturated to deliberation and scepticism of fads and trends originating in industry (Duderstadt et al., 2003, p. 49)*

The general feeling is that there has been very little progress and impact with teaching and learning with technology over time, with HE slowly responding and embedding educational technology innovations. The establishment of TEL in HE however, is far from easy and overstating the idea that HE is slow to adapt does little to further discussions about how perceptions, practices and policies serve to shape teaching and learning. Winslett (2010, p. 1) argues that the Australian university sector is extremely keen to be seen as innovative and hence there are 'claims of innovative practices appearing from university mission statements and marketing material to individual performance agreements'. Conversely, as Gray and Radloff (2010) have asserted, Australian HE policies are unlikely to be effective tools for teaching and learning strategic change:

> *…the plans appear to be a poor reflection of the learning and teaching goals actually being pursued by the institutions, the real commitment to responsibilities for learning and teaching in practice or the genuine activity around improvement and change on the ground else that could be considered worthwhile to improve learning and teaching (p. 301).*

Equally troublesome is that research into technological developments tend to be directed *by* policy rather than informing them (Conole et al., 2007). Poor policy can lead to centrally driven initiatives that have unachievable or unrealistic goals directly attributed to by misguided understandings of technology and its potential to transform

education, whilst not considering the many factors that need to change in HE for it to do so (Conole & Oliver, 2006; Stiles & Yorke, 2006). Such approaches also often see professional practice based on 'objective' evidence about 'what works', and what is valued in this approach is the ability to assess the project/strategy's degree of success. However, as D. Gibbs and Gosper (2006) and Gunn (2014) have suggested, centrally derived and driven initiatives have had lower rates of participation and uptake from educationalists, and as such they are not the ultimate one-size-fits-all solution to enabling TEL innovations.

Instead, Veletsiano's (2016) supposes that it is highly realistic to *not* meet centrally derived goals or outcomes as "events and phenomenon do not happen in a formal or pre-determined way, but rather occur spontaneously and unexpected in dynamic environments that both influence activities and are influenced by those activities" (p. 23). Thus, this policy rhetoric does not, in turn, reflect what eventuates as practice and their advice of:

> *…more measured and reflective approaches to TEL policy, the need to account for organisational context and in particular to deal with clashes between different cultural perspectives, and the importance of the human aspects of implementing [TEL] rather than a focus on technological developments. (Conole et al., 2007, p. 39).*

Although innovation may be considered important to economic and social growth, how this works on the ground is not straightforward, with staff members struggling to adjust (Dobbins, 2009). For example, as HE institutions are expanding and becoming increasingly diverse, there is a concurrent and significant growth in academic workload. When looking at Australian, New Zealand and United Kingdom HE institutes, due to increased workload, time for academic staff to engage in activities aimed at developing their practice is declining (Gordon, D'Andrea, Gosling, & Stefani, 2003), as is space to think, reflect on, and contemplate learning and teaching

practices (Clegg, 2003). Such expansion, diversification and increases in workload may stifle innovation when not properly addressed by institutions (Barrett & Barrett, 2007; Clegg, 2003; Davis, 2003; Naidoo & Jamieson, 2005; Paewai, Meyer, & Houston, 2007).

Therefore, impediments to innovation have been attributed to the want of universities to control its processes and a lack of flexibility and/or agility in dealing with issues arising from massification of HE. Universities in this sense do not easily react positively to the unpredictability of innovative pedagogies (Gunn, 2014; Stiles & Yorke, 2006).

To interrogate the above views there is a need to investigate how HE EDs understand and experience, what has not been examined in any great detail, that is, what is meant by TEL innovation in HE, how teaching and learning is being innovated with technology, and for what purpose.

As a way of comparing what is happening on the ground in my study, to what is envisaged as 'could be happening', I include a summary of "The Horizon Reports Higher Education editions" (produced annually by The New Media Consortium) (Table 2.1). These reports[3] endeavour to describe those educational technologies in HE contexts that are relevant to learning and creative inquiry both currently, and up to five years in the future. Caution should be applied here however as these reports focus on the technology- in how rapidly they may emerge and how they may possibly be utilised and distributed in educational settings. Nonetheless, by comparing what

[3] These reports were also developed to identify and describe emerging technologies likely to have a large impact on teaching, learning, or creative expression within higher education. Although there have been Horizon reports produced covering diverse educational sectors since 2004, it is only since 2012 that they have included views from Australian contexts. Before that, reports were tailored to HE contexts in North America.

could be happening to what is actually happening, I intend to illustrate actualities and distance to speculated futures, and therefore provide a point of reflection.

2.4 Challenges to Educational Designers Technology Enhanced Learning innovative work in Higher Education

In terms of a professional body of EDs (and as was introduced in 1.2.3), Land's (2004) research shows that collectively, they are "a fragmented community of practice, with different academic and professional identities, inscribed within different discourses and drawing on different metaphors to represent the issues they face and the contexts in which they work" (Land, 2004, p. 12). He summarises the individual ED as having a certain "orientation to educational development and [which] include the attitudes, knowledge, aims and action tendancies….in relation to the contexts and challenges of their practice…[B]ut….they are not fixed [characteristics]" (p. 13). EDs in this study may therefore take on different orientations according to their contexts and particular points in time. EDs understandings are:

> *…constructed and brought into being by, or in reaction to, the social and historical contexts in which developers find themselves situated. Being constructed, they are rendered more or less stable, dependant on the strength of dominant discourses with an organisation. These subjectivities are constructed within, and in relation to, cultures and discursive practices and are at the heart of ways of thinking and practicing. The central argument here is that there are multiple orientations to development deriving from the multiple cultural configurations and competing discourses to be found within academic organisations (Land, 2004, p. 13).*

NMC Horizon report 2017 HE Edition (Adams Becker et al., 2017)	NMC Horizon report 2016 HE Edition (L. Johnson et al., 2016)	NMC Horizon report 2015 HE Edition (L. Johnson, Adams Becker, Estrada, & Freeman, 2015)	2015 Technology Outlook Australian Tertiary Education (L. Johnson, Adams Becker, & Hall, 2015)	2014 Technology Outlook Australian Tertiary Education (L. Johnson, Adams Becker, Cummins, & Estrada, 2014)	2013 Technology Outlook Australian Tertiary Education (L. Johnson et al., 2013)	2012 Technology Outlook Australian Tertiary Education (L. Johnson, Adams, & Cummins, 2012)
Time-to-adoption Horizon: One year or less						
Adaptive learning Mobile learning	Bring your own device Learning analytics & Adaptive learning	Bring your own device Flipped classrooms Learning Analytics Mobile Apps	Bring your own device Flipped classrooms Learning Analytics Cloud computing	Bring your own device Flipped classrooms Mobile learning Online learning	Learning Analytics MOOCS Mobile Learning Social media 3D printing	Cloud computing Learning Analytics Mobile Apps Tablet computing
Time-to-adoption Horizon: Two to three years						
Internet of things Next generation LMS	Augmented & Virtual reality Maker spaces	Collaborative environments Games and gamification Makerspaces Wearable technology	Badges/microcredit Mobile learning Open licensing Wearable technology	Badges/Microcredit Games and gamification Learning Analytics Open content	Badges Information visualization Location-based services	Digital Identity Game-based learning Open content Personal learning environments
Time-to-adoption Horizon: Four to five years						
Artificial intelligence Natural User interfaces	Affective computing Robotics	Adaptive learning technologies Flexible displays The Internet of Things Wireless power	Adaptive learning technologies Augmented reality Quantified self Telepresence	The Internet of Things Machine learning Natural user interfaces Wearable technology	Flexible displays The Internet of Things Virtual and remote labs Wearable technology	Digital preservation MOOCS Natural user interfaces Telepresence

Table 2.1: Summary of the NMC Horizon Reports (Higher Education Editions 2012-2017) indicating educational technologies likely to have impact on teaching, learning or creative expression.

Additionally, Cousin's (2005) suggests that who and what we are is shaped by how we understand technology, that is, technologies can constitute our identities (see also 1.2.3). Winslett sees TEL being complicated by:

> *…academics and teaching support staff [who] are often punch-drunk with teaching and learning strategies, pet educational theorists, fetishized views on technology and the student cohort, institutional intrigues and breathless rhetoric around the latest so-called innovation (Winslett, 2016, p. 535).*

This rather brusque explanation however seems a little unfair when the larger context of where EDs sit is taken into account. When doing so, EDs are postulated as "being subject to struggle regarding 'position' and agency and…susceptible to the demands of new power regimes and technological solutions" (Hudson, 2009, p. 3). This struggle is brought about by a number of additional factors, including the shifting value of social, cultural and economic capital in constantly changing higher education environments, politicising their roles as a result (Hudson, 2009). As such, EDs need to take into account the university's institutional strategic plan, policies and procedures, their faculty/school/college/unit's strategies and the academic and professional framework that guides what gets done and by whom. This is further complicated by allocated budgets that EDs often have no influence or control over.

When further rationalising EDs challenging work, to develop teaching and learning they engage within a wide range of institutionally directed strategies, but often only get to work on a small sub-set of prioritised activities as directed by institutional "beliefs about what matters and about how change occurs" (G. Gibbs, 2013, p. 5). Further, with universities operating more and more like businesses and focussing on efficiencies and workflow, ED's roles have become directed less towards the support of innovation at an individual or small team basis and with having broad TEL

innovation possibilities to choose from, to that of a narrow remit related to an institutional mission and often driven by external projects and central government/funding body agendas about the future of education (Browne & Beetham, 2010). “In this regard, [EDs] are likely to be much more closely identified with institutional missions than staff on traditional academic contacts, who are, at least in a relative sense, buffered from the winds of change” (p. 22). As Winslett (2016) has also noted, EDs often have position descriptions that include the need to monitor and/or research newer educational technologies to inform, and possibly support, implementation in teaching and learning environments. These position descriptions themselves are built upon university strategies and policies that promote innovation as an important aspect of what they do, and provide “a powerful cue” and a “legitimate basis for enthusiastically connecting new technologies…with pedagogical advances”, but with additional cues within the same policies/strategies requiring them to “work with existing resources, approaches and infrastructure” (Winslett, 2016, pp. 543, 544). The above suggests that the EDs do not get much say in what gets done and how it gets done. Also, their role of monitoring or researching is very much bounded by institutional constraints and unless these change, TEL innovation will be restricted to that which fits into pre-existing conditions.

In contrast to inflexible policies and strategies, G. Gibbs (2013) argues that EDs work should not “do more of the same kinds of things [but have] an evolving rationale and focus of attention [because of] increased sophistication and understanding of the way change comes about and how it is embedded and secured within organisations” (p. 5). This should translate into EDs undertaking a variety of ways over time to improve TEL and teaching. Yet, literature has shown that “there is no clear evidence of [EDs] being primary movers behind major changes to pedagogical approach” (Browne & Beetham, 2010, p. 30). What’s more, Uys and Gunn (2012) have noted that EDs “are often treated as suspects in an undefined crime” when it comes to attempts to

innovate within their institutions (p. 1). Such experiences were also recorded by Browne and Beetham (2010) who further state that EDs do not "enjoy an employment status akin to that of an academic" (p. 17). The endeavour of innovating may also be damaging to an EDs career progression as such positions and associated tasks challenge traditional education practices (ibid.) This retribution seems surprising given EDs central support status and responsibility to assist in improving teaching and learning. It is therefore recognised that working in a position situated between institutional, academic and professional contexts is difficult (McNutt, 2013; Whitchurch, 2009; Winslett, 2016).

What's more, EDs should be in positions that enable them to see where and how institutional structures, policies and culture can either enable or inhibit TEL innovation (Hannan, 2005; Hannon, 2008; Shephard 2004). However, knowing about the enablers and inhibitors doesn't necessarily make innovation any easier to undertake:

> *… the existence of [innovating but only within existing structures]…puts teaching support staff in a complicated situation. How, for example, do teaching support staff know when to lobby for additional funding and resources? How innovative must a particular work activity be? When deciding between innovating or operating as 'business-as-usual', the strategic plans do not provide teaching support staff with clear direction (Winslett, 2016, p. 544).*

It seems likely, similar to Land (2004) research, that EDs may be in organisational spaces that do not allow them educational agency and they do not have a good idea, nor guidance of how to go about supporting TEL innovation within their institutions. EDs need more guidance with how to enact TEL innovations, as institutional strategic plans more often than not "contribute to the challenges and complexities for teaching support staff" by containing "conceptual ruptures and superficialities" that may have

“an adverse impact on the agency, advocacy and relationship building teaching support staff require to be effective” (Winslett, 2016, p. 546).

With EDs work becoming increasingly complex, and yet central to the university because of their ‘change agent’ status, the need now is to research the understandings and experiences of EDs as they occur in context to recognise both limiting and enabling innovative TEL beliefs and practices :

> *Such a role represents a coherent and viable approach to engaging with change within institutions, both in the short term in the form of implemented policy and in the longer term through the development of staff (M. Oliver, 2002, p. 251).*

2.5 Conclusion

This chapter provided an orientation to literature that underpins TEL innovation and the role of EDs in HE. It has unpacked terms such as technology; Educational Technology; TEL and TEL innovation, for clarification in relation to the focus of the study. I also discuss the wider context in which TEL innovation sits, that of being susceptible to the effects of globalisation and knowledge-based societies and economies that may not be overly concerned with the good of society. The related challenges for EDs is deliberated and the scene set for the research premise.

The following chapter will introduce the research philosophical grounds, framework, design and processes, and its trustworthiness and rigour.

Chapter 3 The Research Framework, Design and Processes

> *In order to make sense of how people handle problems, situations, the world, we have to understand the way in which they experience the problems, the situations, the world, that they are handling or in relation to which they are acting.*
>
> Marton and Booth (1997, p. 111)

3.1 Introduction

In the previous chapter, I presented an outline of TEL innovation and the larger context in which it is placed. I also gave a background of the challenges that EDs face in such an environment. In this chapter I intend to give a clear account of my research approach and process. To do so I discuss the research framework, including the choice and reasons for using Developmental Phenomenography; the research design; analysis of data and; ensuring trustworthiness and rigour.

3.2 An orientation to Phenomenography

Phenomenography is a qualitative research approach developed by Marton and his colleagues in the 1970's. Phenomenography was initially designed to answer questions about thinking and learning and it was developed especially for educational research (Marton, 1981, 1986; Marton & Booth, 1997; Tight, 2015). Tight (2014) describes phenomenography as being especially important to the field of higher education on the basis that it was "substantially created and developed within higher education research" (p. 322). However, since its inception it has expanded into other domains including politics, health and social sciences (Marton, 1986; Svensson, 1997; Walsh, 2000).

Phenomenographic studies focus on the varying ways people think about and perceive their world, including the multiple ways reality is experienced (Given, 2008; Marton, 1981; Marton & Svensson, 1979; Säljö, 1997; Svensson, 1997) but its main

aim is for determining ways in which people *collectively* experience phenomena. Marton and Booth (1997) coined this as the phenomenon's 'collective consciousnesses'.

Marton (1986) explains that there are three major lines or orientations of development within phenomenographic research:

- content-related studies concerning general aspects of learning;
- studies of learning and teaching, in particular content-related domains such as mathematics, science etc;
- studies that describe how people conceive of various aspects of their reality.

For the first orientation, studies show that "qualitative differences in learning outcomes are consistently related to qualitatively different approaches adopted by learners" and that "differences in their definition of the situation are closely related to the learners' preconceptions of what learning is" (Marton, 1986, p. 37). In the second orientation, or content-related domain studies, researchers focus on specific preconceptions and their possible modification through formal instruction – the changes that occur and what they look like. The third line of research focusses on how people conceive of various aspects of their reality. Studies in this line aim to map conceptions, that is, the ways in which learning is perceived and in describing how they are relational to one another. Marton (1986) explains the difference between the three orientations:

> *The main difference between the first two orientations and the third is that in the former case we focus on the relation between the conceptions and the conditions and processes from which they originate. In the third line of research we focus on the conceptions*

> *themselves as categories of description and on the relations among these categories (p. 39).*

An investigation of research articles written in the last 40 years has also shown variations in the phenomenographic approach (Akerlind, 2012; Tight, 2015). As stated earlier, Marton and his colleagues developed the approach in the 1970's, though it was only officially coined phenomenography (and substantiated in print) by Marton in 1981 (Svensson & Theman, 1983). Before this, Marton carried out artificial experiments using volunteers as research participants and in looking at how the learning processes occurred. This type of phenomenography was later criticised by Marton himself (1992), in that he questioned the experimental paradigm used, its simplicity, and how results obtained would relate to real world situations.

Pure or discursive phenomenography arose in the 1970's. Studies using this approach rely on discourse as the main source of data (Hasselgren & Beach, 1997) and do not involve any intentional learning tasks studied in any detail (which conversely is often the case when employing an experimental approach). Rather, data is collected from the interview (the discussion) and an analysis of it determines the conceptions related to the phenomenon under study. Because of this, pure phenomenographic/discursive studies consist only of descriptions.

The naturalistic stage followed on from this experimental phase. In this stage more complex learning situations were studied from the perspective of the participant and in naturalistic and authentic settings (Marton, 1992). The researcher collects data through observations of happenings in the naturalistic setting. From this research, Marton presented the idea that description could be hierarchically arranged, with less complex understandings being subsumed by the more complex.

A later date saw the rise of Developmental Phenomenography, which was conceived to allow for actions and improvements from the findings of the research.

Developmental Phenomenographic research attempts to illustrate how people experience some aspect of their world whilst inspiring and prompting participants and those that work with them to change the way their world operates (Bowden, 2000b). It does so by explaining the different ways people think about the phenomena to help uncover conditions that facilitate the transition from one way of thinking to a qualitatively 'better' perception of reality (Marton, 1986). In this way "research transforms from building knowledge about the world to being transformative in itself" (Collier-Reed, Ingerman, & Berglund, 2009, p. 340).

With the above outline in mind, I chose to undertake a study that describes how people conceive of various aspects of their reality and with a Developmental Phenomenographic approach.

In the coming section I will describe in more detail the ontological and epistemological assumptions that helped shape my phenomenographic study.

3.2.1 Ontological and epistemological assumptions

Within my phenomenographic study lie hermeneutic ideals following Heidegger's notion of understanding (Heidegger, Stambaugh, & Schmidt, 2010). In this respect, it is understood that the experience of the phenomenon is not fully understood or conceived by individuals solely 'within themselves', nor are experiences 'psychological' in nature. Instead, 'things' are given meanings through interpretation, firstly by considering phenomena in their own context and on their own terms. Marton (1986) describes this in relation to a phenomenon, that is, a phenomenon is thought of in terms of the content of thinking rather than the process of thought or perception, with content being related to the sum of all knowledge of the phenomenon. Another way of describing it is in being interested in studying "the anatomy of the experience itself, rather than on the anatomy of the mind underlying the experience" (Marton & Pang, 2008, p. 543). In this fashion "understanding is always of a relation already

established between knower and the world, as a relation that manifests historically and culturally through language" (Barnacle, 2001, p. 11). Further, Marton and Svensson (1979) describe two distinct differences when studying experiences or perspectives: first is from the observational perspective or, studying the research participants' perspectives 'from-the-outside'. This is the noumenal perspective. Second is the experiential, or perspectives 'from-the-inside', that is, from the perspective of the research participant. This is the phenomenal perspective. Phenomenographic research involves studying the second order perspective or conceptions of reality and how the world is understood by that person.

Similar to Marton & Booth (1997), I believe that there is no one 'truth' of reality. In turn, I see reality as involving the amalgamation of the whole range of individual experience (Uljens, 1996). Reality "…is constituted as an internal relation between [beings]. There is only one world, but it is a world we experience, a world in which we live, a world that is ours" (Marton & Booth, 1997, p. 13). Additionally, Marton & Booth (1997) talk about humans not just experiencing and perceiving 'things' in a vacuum, but perceiving and experiencing these things in particular contexts, where social, physical, cultural and political influences come to play. Consequently, the descriptions of perceptions and experiences have to be made in relation to the content of the thing (Collier-Reid & Ingerman, 2013) and reality is not something 'out there' that can be described in one true 'objective' sense. Further, it is proposed that there is an internal relationship between the experiencer and the experienced and "it reflects the latter as much as the former" (Marton & Booth, 1997, p. 108). As such, Phenomenographers take a non-dualist stance and all experience is built on the relationship between the phenomenon and that which is being experienced (Collier-Reed et al., 2009; Stenfors-Hayes, Hult, & Dahlgren, 2013). This contrasts with cognitive focussed studies, such as constructivism, and cognitivist approaches that

> *…describe conceptions in terms of the general cognitive functioning of the individual, implying that the cognitive act of understanding can be described in terms of psychological entities within an individual and can be fully accounted for by the conditions of cognition or internal mechanisms (Marton & Pang, 2008, p. 535).*

Thusly, Phenomenography is often referred to as a taking a relational approach to research. In this case the phenomenon under study (innovation with TEL and under TEQSA TS), and the people experiencing the phenomenon (EDs), are viewed as inseparable entities and all experiences of the phenomenon are treated as logical and valid (Yates, Partridge, & Bruce, 2012).

3.2.1.1 Influence of the ontological and epistemological assumptions on the methods employed

Because phenomenography involves participants communicating ideas with the researcher, the collection and analysis of such data involves interpretation. With interpretation comes the researcher's responsibility to authentically represent the participant's perspectives. Interpretation:

> *…does not aim at overcoming difference, but rather dialogue with difference. The reader and text, or interlocutors, must both give – in the sense of giving oneself over, or offering oneself – and also of making room, or transforming, through what is understood. Interpretation should not be about making familiar, but rather, transforming, or challenging the familiar. Interpretation – and therefore understanding – to truly be such, involves crisis (Barnacle, 2005, p. 47).*

Here, the term crisis is used to describe the challenges associated with interpretation. Akerlind explains it as a:

> *…dialectical requirement to understand the situation as much as possible from the perspective of the client, and thus to deeply attend in*

> *a non- judgemental way to what they are expressing, while simultaneously being open to contradictions or unexamined assumptions in their thinking on which it may be helpful to challenge them (2005b, p. 127).*

Drilling deeper, Laurillard (2002) explains "the unit of phenomenographic research is the 'way of experiencing something' and the focus is the variation in ways of experiencing something among [the research participants]' (p. 29). Akerlind (2005a) argues that "[a]t any one point in time and context, people manage to discern and experience different aspects of a phenomenon to different degrees" (2005, pp. 6-7) and hence a person's understanding of a phenomenon is always partial and as such can be experienced differently. Barnard, McCosker, and Gerber (1999, p. 215) support this view and state further that "within subjective knowledge, there is meaning and understanding that reflects various views of the phenomena". The purpose therefore of phenomenographic research is to make the participants' perception/experiences visible through the process of contrasting each to the other and thus revealing the differences between the perceptions/experiences, and made possible due to inherent critical aspects (Collier-Reid & Ingerman, 2013).

Moreover, Marton (1981, p. 181) purports that "aspects of reality, are experienced (or conceptualized) in a relatively limited number of qualitatively different ways [and that] there seems…to exist a level of modes of experience, forms of thought, worthwhile studying". The limited numbers of ways in which certain phenomenon appear to people occur whether or not they are embedded in the immediate experience of the phenomenon or by reflected thought about the same phenomenon (Marton, 1994).

In short, it is the totality of ways in which people experience the phenomenon that is the focus of a phenomenographic study, however, Marton & Booth also state that this can be "at least, a subset of the totality that is pertinent and accessible for the sort of people being studied" (1997, p. 121). To present the qualitatively different ways of

perceiving the phenomenon, the phenomenographic researcher characterises different experiences and perceptions as 'categories of description' (Marton, 1994) and aims to show how the different ways of understanding relate to one another (Marton, 1981). This is revealed through a strategy of mapping experiences/perceptions. The categories of description are even more insightful when looking at the similarities and differences between them. Marton and Pang (2008) assert that it is the differences of that which varies, and that which is invariant, that helps to specify the conditions which are necessary for a certain experience or possible outcome.

In this study, understanding innovation in TEL and as related to TEQSA TS will be borne out through the capturing of all the entities of meaning accorded by the research participants and with each entity "lending meaning to the rest" (Marton & Booth, 1997, p. 124). Through an investigation of the key aspects of the variation in meanings and experience, I intend to show a hierarchy of understandings. Tight (2015, p. 2) explains it as "each higher level encompassing those below it, and the highest level representing the most advanced or developed way of experiencing the phenomena". These meanings/concentrations are more advanced, more complex, or more powerful than those lower down in the hierarchy (Marton & Booth, 1997). This hierarchical grouping is called the "outcome space" (Marton, 1994), and portrays the different ways in which the phenomenon is understood (see Chapter four). As suggested by Akerlind (2005b), the qualitatively different ways of experiencing the phenomenon – in this case TEL innovation and TEQSA TS, should represent more or less complete understandings of this phenomenon.

3.3 Why Developmental Phenomenography?

Phenomenography is "an approach to – identifying, formulating, and tackling certain sorts of research questions" (Marton & Booth, 1997, p. 111). What I consider

important for my research approach, is firstly focussing on the finite number of ways EDs perceive, conceptualise, experience and understand TEL innovation within their contexts, and secondly as related to TEQSA TS. This signifies that the study relates to collective understandings and experiences of EDs rather than on individual experiences. In this section I outline a number of comparable research approaches and explain that, although they provide possible alternatives, the research questions are better supported by a Developmental Phenomenographic approach.

3.3.1 Comparison to Phenomenology

Phenomenography is often closely aligned with phenomenology, however phenomenography is "not an offspring of phenomenology" (Marton, 1986, p. 40) and it is not thought of as being part of the phenomenological tradition (Svensson, 1997). Phenomenology is an approach that studies the first-order perspective, that is, to describe the world as it is, the pre-reflective level of consciousness (Marton, 1981), how people individually experience and explain their world without any contradictions or alternatives to this experienced lived world. With phenomenology, the researcher tries to find commonalities across all data (Larsson & Holmström, 2007). It is the common essence of experience across all experiences that is sort and hence described in phenomenological studies (Given, 2008; Marton, 1986). Phenomenology also follows a dualistic ontological approach, that is, the experiencer and the object of experiencing are considered separate to one another- the relationship *between* the phenomenon and that which is being experienced is not considered. In this approach, the researcher describes experience in rich detail, attempting to capture all the ways a person experiences and describes the phenomenon of interest (Marton & Booth, 1997).

Phenomenography however, has its origin in pedagogical rather than the phenomenological traditions (Barnard et al., 1999). This phenomenographic research

attempts to describe how a person understands their world. The focus is on the variations of experiencing and will emphasise collective meaning. It has resulted in a map of variations of experience and a hierarchy of understanding. My methodology being developmental also means that results were 'placed' within specific timeframes and contexts.

3.3.2 Comparison to Ethnography

In Ethnographic studies, the researcher is immersed in the 'natural' world of the people and culture in its totality. Participant observation is often undertaken with the associated notes of the researcher being a key source of data in this approach. Ethnographers acknowledge that their data gathering process may affect the phenomenon s/he is studying and as such, ethnographers would take that into consideration when analysing the data. With ethnography the whole picture is of concern and the context and its nuances are studied in unison. In comparison, with a phenomenographic approach, what is said by participants is taken at face value (that is, from the participant's rather than the researcher's point of view). In phenomenography, participants' perceptions are generally not questioned except when the researcher requires further clarification. Phenomenographers are interested in particular parts of the context that are relevant to the phenomenon under study and to focus on aspects of research data collection that are best suited to gaining relevant data- "[they] do not have to 'buy' the whole context; rather it is [a] task to discern its most significant aspects" (Marton, 1988, p. 196). In phenomenography, there is an aim to find the variations of data and an acknowledgement that there is a limited number of ways a phenomenon can be experienced, and the approach acknowledges the researchers indisputable influence on the analysis process. Another point of difference with ethnography is that the categories of description in phenomenographic studies do not retain rich descriptions closely related to natural

'raw' occurrences, rather, categories are hierarchically arranged with some descriptions seen as having deeper meaning than others (Marton, 1988).

3.3.3 Comparison to Grounded Theory

Another research method I could have chosen is Grounded Theory. In this case a theory (or theories) would emerge through the constant comparative method of analysing research data (Corbin & Strauss, 2008; Glaser & Strauss, 1967). The data would be collected through a number of interviews with participants until the researcher deems that no new ideas are being generated and hence data is 'saturated' (Charmaz, 2006) . Data is analysed from the very start of the data collection process and emergent findings greatly influence further data collection and analysis (Charmaz, 2006). Member checking of the transcripts and the findings of the analysis are also brought back to the participants for verification. The aim of this type of methodology is to give individual voice to the findings and to find commonalities between findings to develop an inductively derived theory that is grounded in the data, that is, 'grounded theory' (Charmaz & Smith, 2003). The aim here is to build a theory or a conceptual model based on a real context/situation and which can represent experiences in similar contexts.

As I wanted to focus on the variance of understandings and experiences rather than individual, Grounded Theory was not the most appropriate choice. Individual's understandings and experiences were included but these were analysed holistically across all transcripts so that no one voice was advanced above others (P. Green, 2005). Additionally, I was not overly interested in forming a theory based on commonalities, but rather to illustrate a range of perceptions and their relationship to one another. In accordance, interview questions/responses in this study allowed participants to discuss both the 'what' was perceived and experienced, as well as the 'how' it was experienced (see 1.3 and 3.4.1). I did however borrow some elements

from Grounded Theory such as only conducting a literature review after collecting data (see 3.4.4) and analysing data similar to the constant comparative method (see 3.5.2)

3.3.4 Comparison to Pure Phenomenography

Lastly, the 'pure' phenomenography approach provided some basis for my research in that it relied on discourse (the interviews) for providing data and focused on describing how people conceive a phenomenon being experienced in everyday life (Marton, 1986). Further, this approach allowed for a full description of the variations in experiencing a phenomenon. I however, decided to use Developmental Phenomenography to extend the use of such information to cause change. Hence, I aimed to uncover EDs understandings and experiences of TEL innovation, hopefully with the result that it could facilitate a transformation of EDs TEL innovative work.

3.3.5 Summary of my reasons for choosing Developmental Phenomenography

In summary, although various other research approaches have provided useful methodological elements, I settled on using Developmental Phenomenology because (Akerlind, 2005a, 2005b):

- The study focused on related meanings rather than on any independent meanings that emerge from the data.
- The key aspects or dimensions of innovating with TEL and the influence of TEQSA TS were attributed across all participants.
- The different ways of understanding are seen as inherently context-sensitive in nature, which means that the individual experiences TEL innovation and the influence of TEQSA TS differently under different circumstances. This study looked at experiences a participant had highlighted or perceived as being most relevant at that time, in their contextual circumstances.

- It is "…descriptive or interpretive rather than explanatory, that is, investigating what sort of differences in meaning and understanding occurred across individuals rather than attempting to explain or investigate causes of these differences" (Akerlind, 2005a, p. 7).

- I focussed on aspects of TEL innovation and the influence of TEQSA TS that were critical for distinguishing one way of experiencing from a qualitatively different way, rather than on the variation within individual experiences. Akerlind calls this the "minimum features necessary for drawing such distinctions" (Akerlind, 2005a, p. 8).

- The development of outcome spaces enabled a comparison of participants' perceptions to that of their actions, which in turn illustrates how EDs' differing perceptions of TEL innovation may be influential to differing experiences. A critical analysis of both perceptions and experiences was possible, revealing to EDs how context may shape experiences. The intention of not only exposing such ways of 'thinking and doing' but also in analysing these, is to help facilitate the transition from one way of thinking to a qualitatively 'better' perception of reality (Marton, 1986). The analysis of findings in this case aims to inspire and encourage EDs, and those that work with them, to change the way their world operates (Bowden, 2000b).

3.4 Research design

Notwithstanding the ontological and epistemological assumptions above, phenomenography is considered an empirical research tradition with the researcher studying the experiences of others (Marton, 1981, 1986; Svensson, 1997). This section outlines the particular research design that I employed (that is, the structure of enquiry) to ensure that I appropriately addressed the research questions outlined in section 1.3 and whilst staying true to the phenomenographic approach. My

research design was also shaped by Svensson and Theman (1983) who suggested that the outcome of an interview, and the descriptions produced, is driven by; the aim of the investigation; the expected descriptions from participants; the method employed to get the data and; how the researcher believes the research results or findings can be attained.

I also draw attention to phenomenographic research involving a process of discovery rather than verification with data being collected without pre-conceived ideas about what the phenomenon is and how it is experienced (Säljö, 1997). I firstly wanted to focus on what the EDs were saying (the actual), rather than judging their responses against that which is already known (by myself and/or the broader theory) (see also 1.6). I wanted to assist in the "thematization of aspects the [participants] experience not previously thematized" and to make these "into the object of focal awareness" (Marton, 1994, pp. 4427, 4428), and therefore I firstly collected data (the interviews) followed by a period of analysing the data and only then did I undertake the literature review. In explanation, being a relatively inexperienced researcher, I wanted to minimise unconscious influence from having undertaken a literature review before the data collection and analysis process. Disadvantages of not undertaking a literature review include not having pre-developed theoretical sensitivity and familiarisation with the literature on the study topic (McGhee, Marland, & Atkinson, 2007; Schreiber, 2001) that often results in the generation of large amounts of data during the collection stage. Large data sets can be difficult to manage (Hussein, Hirst, Salyers, & Osuji, 2014) and may require extensive periods of time for analysis. I reduced these disadvantages by using Nvivo software to manage the large amount of data (see 3.5). Also a drawback, a literature review done before data collection is often necessary to ensure that the research is not duplicated elsewhere, and in often can help a researcher stay on track and not be distracted by what may be irrelevant data (Dunne, 2011; McGhee et al., 2007).

However, I attempted to outweigh the above disadvantage by following a well-defined documented research process, which is described further in the following sections.

3.4.1 The interview questions

As suggested by Collier-Reid and Ingerman (2013), I developed a small number of broadly phrased, but key interview questions (See Appendix 1). Questions were also designed to generate data that helped establish critical variation in the participants' ways of experiencing TEL innovation (Cope, 2004). Cope explains the design as allowing a structure of awareness that is designed to illuminate:

> *…dimensions of variation, 'values' in dimensions of variation, the existence and nature of relationships between dimensions of variation, the nature of the boundary between internal and external horizons, and the meaning of the phenomenon inherent in the structure (p. 13).*

The type of research questions asked were guided by phenomenography's second-order perspective, with that of a 'how' and a 'what' nature being given a higher merit over that of 'why' (Yates et al., 2012). I was further guided by Akerlind's (2005b) research, and hence, questions moved from asking about the participants actions, to experience, and from concrete to abstract, to ensure actions were 'according to them' rather than being attributed to a third person (Entwistle, 1997). To "elicit the interviewee' intentional attitude towards the phenomenon" (G. Akerlind, J. Bowden, & P. Green, 2005b, p. 65), the later focus of questioning then turned to the 'why' (encouraging reflection).

3.4.2 Choice of universities from which research participants were chosen

Australia is home to 40 public, and a small number of private universities spread throughout its large land mass (please see Figure 3.1). Most of the universities are found in NSW (10), followed by Victoria (8), Queensland (8), Western Australia (5),

South Australia (4[4]), ACT (2), Tasmania (1), Northern Territory (1), and one National University.

For this study, I deliberately chose universities that were known to have high to medium numbers of students who studied at least some of their time off campus for two main reasons:

- Firstly, these universities were more likely to employ technology, such as e-learning/online learning, to enable teaching and learning through technology as well as communicating with students.

- Secondly, the universities were more likely to employ EDs to support academics with teaching with technology.

I utilised the Department of Education and Training's statistics database (Department of Education and Training, 2016) to investigate the number of students that studied off campus across Australian universities. Unfortunately, this database does not have an 'online' category for mode of study and hence I could not easily determine which universities had the highest number of students studying online. However, it did have external and multi-modal categories. GRATTON Institute (Norton, Sonnemann, & McGannon, 2013) suggests that the number of students studying off campus will give a good indication of where online learning is used. According to Norton (2012), more than one in five students in Australian universities attend university in an external mode, that is, off-campus.

Table 3.1 indicates the Universities that teach more than three-quarters of their students' off-campus

[4] There are another two non-Australian universities in South Australia

Figure 3.1: Australian Universities Map (Australian Government, 2016a)

University	Number of external students	Number of multi-mode students	Total number of students studying off campus
Charles Sturt University (NSW)	23,223	5,727	28,950
University of Southern Queensland (Queensland)	19,797	4,048	23,845
University of New England (NSW)	17,438	1,903	19,341
Central Queensland University (Queensland)	10,791	2,709	13,500
Southern Cross University (NSW)	5,629	3,693	9,322
Charles Darwin University (Northern Territory)	7,195	1,755	8,950

Table 3.1 List of Universities with high to medium numbers of students studying off-campus (current as of 10 June 2016) (Department of Education and Training, 2016)

Other universities with high numbers of students studying away from campus (including those doing multi-mode study) are provided in Table 3.2 below:

University	Number of external students	Number of multi-mode students	Total number of students studying off campus
Deakin University (Victoria)	13,203	10,166	23,369
Griffith University (Queensland)	3,894	13,213	17,107
University of Tasmania (Tasmania)	9,103	4,451	13,544
Curtin University of Technology (Western Australia)	7,768	4,308	12,076
Swinburne University of Technology (Victoria)	11,294	924	12,218
University of South Australia (South Australia)	6,100	5,600	11,700
Edith Cowan University (Western Australia)	5,401	5,841	11,242
Monash University (Victoria)	5,697	4,881	10,578
University of Newcastle (NSW)	5,491	4,205	9,696
James Cook University (Queensland)	2,071	7,112	9,183
Macquarie University (NSW)	3,615	4,942	8,565
University of Sydney (NSW)	1,622	6,414	8,036
University of Canberra (ACT)	349	6,767	7,116

University	Number of external students	Number of multi-mode students	Total number of students studying off campus
La Trobe University (Victoria)	1,744	5,284	7,033
Queensland University of Technology (Queensland)	4,498	2,301	6,799
RMIT University (Victoria)	844	5,626	6,470
Murdoch University (Western Australia)	3,145	2,512	5,657
Flinders University (South Australia)	3,633	1,358	4,991
Western Sydney University (NSW)	1,149	2,984	4,133

Table 3.2 Australian Universities and numbers of students studying off-campus (Department of Education and Training, 2016)

3.4.3 Securing research participants

Initially, twenty-nine people took part in this study. These were the total number of people that responded to my request to participate. The finalised study had twenty-six participants, the reasons for which will be discussed in this section. Participants were employed at twelve of the seventeen universities that I found to have high numbers of off-campus students (see Table 3.2). From this, one university was excluded as the research participant did not fit with the other research participant profile (discussed in more detail below). Hence, for this study research the twenty-six participants worked at eleven different universities as shown below:(see Table 3.3). Figure 3.2 shows the location of the participating eleven universities.

- Deakin University (Geelong, Victoria)
- University of New England (Armidale, NSW)
- Griffith University (Brisbane/Gold Coast, Queensland)
- University of Tasmania (Hobart, Tasmania)
- University of South Australia (Adelaide, South Australia)
- James Cook University (Townsville/Cairns, Queensland)
- Macquarie University (Sydney, NSW)
- The University of Sydney (Sydney, NSW)
- University of Canberra (Canberra, ACT)
- Queensland University of Technology (Brisbane, Queensland)
- Western Sydney University (Sydney, NSW)

Figure 3.2 shows the locations of the universities that form part of my study.

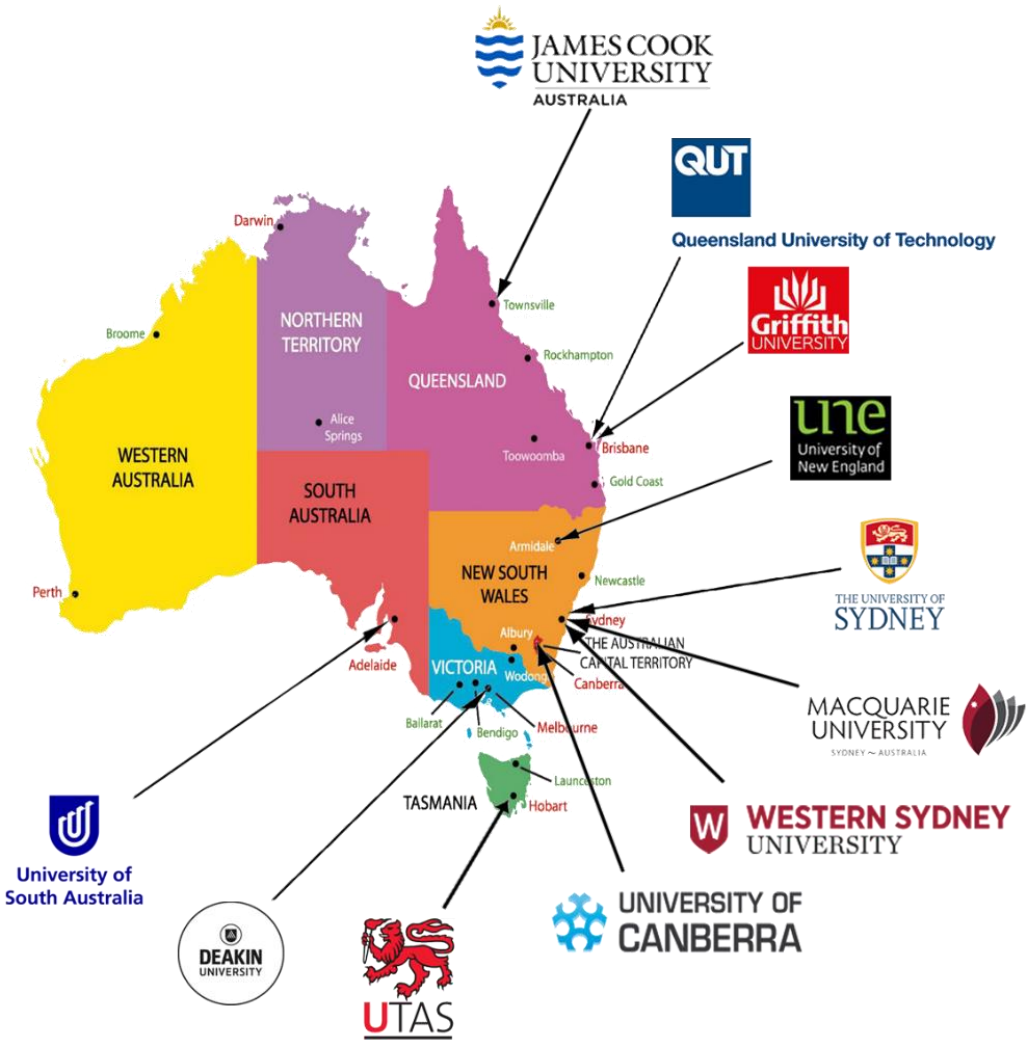

Figure 3.2 Location of universities that formed part of this study

A breakdown of the number of participants in this study as related to their university is found in Table 3.4.

University	No of research participants
Deakin University (Geelong, Victoria)	1
University of New England (Armidale, NSW)	2
Griffith University (Brisbane/Gold Coast Queensland)	4
University of Tasmania (Hobart, Tasmania)	3
University of South Australia (Adelaide, South Australia)	1
James Cook University (Townsville/Cairns, Queensland)	2
Macquarie University (Sydney NSW)	4
The University of Sydney (Sydney, NSW)	2
University of Canberra (Canberra, ACT)	4
Queensland University of Technology (Brisbane, Queensland)	1
University of Western Sydney (Sydney, NSW)	2
TOTAL	**26**

Table 3.4 Participant numbers as related to universities in this study.

There was purposeful selection of participants, as supported by Bowden (2000b), to ensure that the collected data was appropriate to the purpose of my research. As I have worked within educational development and technology for over 10 years, I have experience with these kinds of positions and have a good understanding of what work such staff carry out. However, to ensure that I involved the appropriate person in my study I:

- contacted (where possible) teaching and learning supervisors/managers based in teaching and learning centres/units or in schools/faculties and requested names of who would be most appropriate to take part in this study (I included an overview of my study). In cases where the manager/supervisor of possible participants did not reply, I directly contacted people in positions of EDs or similar by doing searches of online university staff directories;
- further clarified during the research interview that their role was posited as discussed above.

All potential participants from all universities indicated in Table 3.2 were sent an email outlining my study and a 'request to participate'. For those who expressed interest, I sent the study's information sheet, a participant background data sheet research questions and a consent form (see Appendix 2 for these documents). I then negotiated a date and time for conducting the research. I pre-booked meetings with participants (in some cases up to two months or more in advance) and, because I was concerned that some participants may back out of the study, I accepted more participants than my original goal of twenty. My concerns were not substantiated as only one participant dropped out before the data collection stage. I also ended up discarding three participant interviews- two because they were used for piloting and subsequent tweaking of interview questions and the other due to his role not being in line with that of EDs and which transpired during his interview. As a result, the final number of participants came to twenty-six. This is within the range of ideal numbers (between 10 – 30) suggested by experienced researchers (Akerlind, 2005a; Bowden, 2005; Trigwell, 2000), and certainly allowed for sufficient variation in ways of seeing. Different participant demographics, that is, with regards to age (Figure 3.3) , gender (Figure 3.4), qualifications (Figure 3.5), experience within the TEL field (Figure 3.6), areas where employed (faculty/school based or centrally located) (Figure 3.7) and status of employment (Figure 3.8), also offered opportunities for differing perceptions (Akerlind, 2005b).

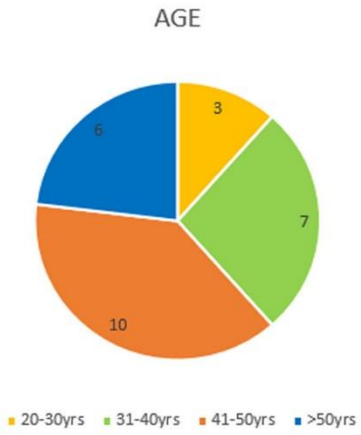

Figure 3.3 Age of participants

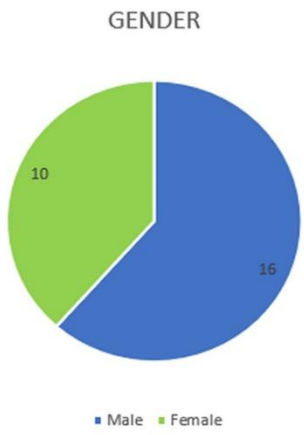

Figure 3.4 Gender of participants

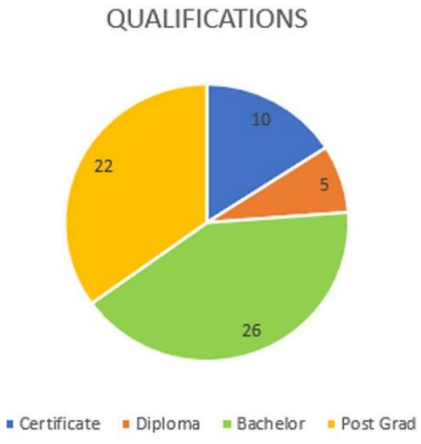

Figure 3.5 Qualifications of participants

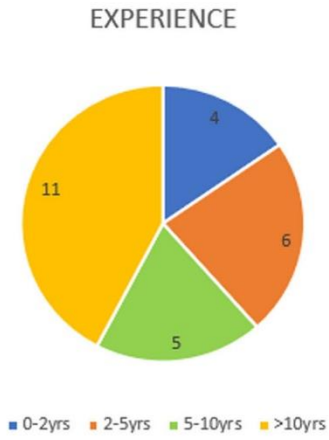

Figure 3.6 Experience in years

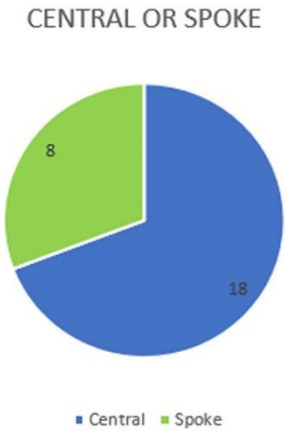

Figure 3.7 Where participants are placed

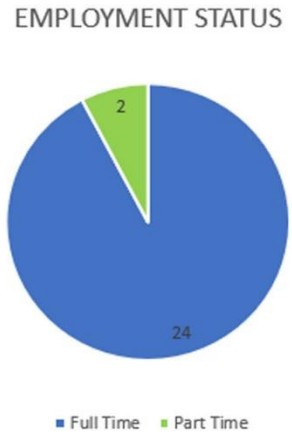

Figure 3.8 Employment status

3.4.4 Collecting data

Data collection occurred between August 2015 and August 2016. Although phenomenographic data can be collected via a number of different methods including interviewing, observation, text based responses, drawings and/or products of work (Marton, 1988), interviews are the most commonly used method (Akerlind, 2012; Stenfors-Hayes et al., 2013; Tight, 2015). I therefore decided to conduct a single in-depth interview with each participant (P. Green, 2005). Firstly, I piloted the interview questions and honed my interview style with two EDs at my (initial)[5] place of work. Further research interviews were then conducted either face to face either by me visiting the participant at their university (12 participants), or via Skype (11 participants). In some cases, Skype was not possible and hence the interview was conducted telephonically (3 participants). There were no discernible differences detected as related to the different mediums of conducting the interviews and all participants indicated that they were comfortable with the medium in which the interview was conducted. Interviews in this study lasted between 46-84 mins, with interview time totalling 26 hours and 55 minutes. The purpose of undertaking a lengthy interview was to have a good opportunity to find out the different ways that the target group see the particular phenomenon within their contexts (Bowden, 2005).

Interviewing also allowed the participant to express their thoughts freely, regarding their understanding of the phenomenon of TEL innovation and TEQSA TS (Bowden, 2000b). As the interviews were semi-structured, I was also able to keep the research study on track as participants could clarify points made and expand on areas that

[5] After interviewing UNE participants, for employment purposes I moved Institutions twice. Twenty-three interviews occurred during my time with the University of Technology Sydney. I finished writing up my thesis at Western Sydney University.

they raised, whilst I was able to steer talk away from areas that were not related to the research.

When collecting data I followed Collier-Reid & Ingerman's (2013, p. 1) advice that "the focus of the of the research is not on the phenomenon per se, but rather on describing how [people] may conceive of the phenomenon" and accordingly I made sure that participants attended to perceptions of TEL innovation and TEQSA TS during the data collection process. To focus participants, and as Bowden (2005) suggests, I developed and used the same opening scenario for each interview (see Appendix 3). This was to ensure that the findings all originated from the same research premise and to help the participants express as completely as possible their perspectives on the phenomenon presented through the opening scenario (Bowden, 2005) .

When conducting the interviews, I attempted to be non-directive and "as open-ended as possible in order to let the subjects choose the dimensions of the question they wanted to answer" (Marton, 1986, p. 42), especially as the intention was for participants to reveal relevance structures in situ (ibid.). I attempted to not make any further substantive input into the interview except when needing to clarify responses and/or to refer the interviewee to issues that they introduced themselves, whilst always ensuring to centre on the perceptions/experiences of TEL innovation and TEQSA TS.

3.5 Analysing data

3.5.1 An overview of the analysis process

Only once all interviews were conducted and transcribed did the analysis process begin (see 3.4). Interviews were transcribed verbatim using Dragon Naturally

Speaking software[6]. To assist in the handling of the large amounts of data, I used NVivo[7] software to store and collate all research related documents, to organise and manage the large amount of data and to assist in the technical aspects of analysing data.

When deciding how to analyse data I researched many phenomenographic studies and theoretical stances. I discovered that there were a number of different processes/methods for carrying out data analysis, which (Akerlind, 2012) indicated as being typical for reported phenomenographic studies. Additionally, I was aware of more recent criticisms of the many phenomenographic studies that fail to present evidence to allow other researchers to assess the trustworthiness of research results (Alsop & Tompsett, 2006; Collier-Reid & Ingerman, 2013) and its "lack of specificity and explicitness concerning both the methods for the collection and analysis of data and the conceptual underpinning of these methods" (Richardson, 1999, p. 53). Nonetheless, Tight (2015) states that phenomenography is a strong qualitative research approach as there are increasing numbers of research reports showing clarified and tightened phenomenography analysis processes. Consequently, the above ideas guided the way that I undertook analysis, which is further detailed below.

3.5.2 Details of the analysis process

My analysis was informed by various research (Akerlind, 2005a, 2012; Collier-Reid & Ingerman, 2013; Hallet, 2014; Hasselgren & Beach, 1997; Marton, 1986; Marton & Booth, 1997; Marton & Pong, 2005; Svensson & Theman, 1983), but in particular it was guided by Dalgren's & Fallsberg's (1991) work. This is because their work,

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[6] Dragon Naturally Speaking is a speech recognition software package. I dictated each audio interview, which the software transcribed into text.

[7] NVivo is a software programme designed to help organise, analyse and find insights in qualitative data.

describing the meanings of a phenomenon and in understanding the nature of variations, clearly outlined the analysis stages employed, and to which I could relate my research. For this reason, my analysis process consisted of similar stages where I:

(i) became familiar with the interviews via repeated listening to the audio recordings and re-reading of transcripts. Edits to transcripts were made during this process. I also developed individual profiles of each of the participants and made notes of my initial view of their transcripts, so to make transparent those views. These were saved as a memo and linked to the participant's data[8] within NVivo;

(ii) identified and then condensed statements/exerts that were considered important to: understanding innovation in TEL; how TEL innovation is experienced; participants' understanding of their work as related to TEQSA TS and; how TEL innovation was experienced under this. During this process 'categories of description' emerged from the data instead of predetermined meanings being searched for. As Marton (1986) advised, meanings of some statements in my study were innate whilst others had to be interpreted in relation to the context from which it was taken to ensure that they were not misinterpreted. This was quite easy to do via Nvivo as excepts could be immediately related back to the original transcript with one click. I also followed Svensson and Theman's (1983) advice such that I selected excerpts that seemed to exemplify meanings present in the larger interview transcript, whilst ignoring perceived irrelevant, redundant or unhelpful components of the transcript[9]. By doing

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[8] The identity of participants within this database was protected by use of coded names.

[9] Selected components that were ignored were filed under separate folders for potential use in research outside the scope of this study.

so, the added bonus was that the analysis of data was made more manageable (Akerlind, 2012);

(iii) compared statements/exerts to determine differences (variations to understanding) and in terms of similarities;

(iv) grouped similar statements/exerts into categories of description. This stage also involved “redefining each category in terms of structural and referential components” (Hallet, 2014, p. 210). The referential aspect was the particular meaning of an individual element/object (the focus), whilst the structural aspect was the combination of characteristics focussed upon by the research participant (Marton & Pong, 2005) (see also 4.2). Hallet (2014) determined referential and structural components as being essential if the researcher wishes to acknowledge the historical, social and material factors that influence experiences. The categories of description arose during the analysis process by looking at the critical aspects of variation (Collier-Reid & Ingerman, 2013). These revealed relationships and linked the different ways of experiencing. It provided “a way of looking at the phenomenon holistically, despite the fact that it may be experienced differently. The aim was to simultaneously portray the whole as well as the parts in a single outcome space of variation” (Akerlind, 2005a, p. 8). These relationships represented the “outcome space”, where there was a representation of the different ways of experiencing;

(v) articulated the essence of the meaning (the similarity) within each category;

(vi) labelled the categories based on their essence and;

(vii) compared and contrasted the categories to highlight their meanings in terms of similarities and differences. Further, the outcome space contained hierarchically arranged categories of description and, as Marton

and Booth (1997) suggest, contains the minimum number of different categories that described the variation throughout and amongst all descriptions. Hasselgren and Beach (1997) suggest that the final number of different categories is determined by the variation between the categories.

Note: Steps (iii) – (vi) were repeated iteratively to make sure that the similarities within and differences between categories were identified and distinctly articulated (Dahlgren & Fallsberg, 1991).

In short, the analysis progressed through a process of iteration where the analysis was derived from a pool of meanings and with time, illuminating the way meanings were conceptualised (P. Green, 2005). The method employed in this study involved mapping- the mapping of the different ways the subjects related to the phenomenon and the environments within which they existed, and how they related and differ to one another, and without that mapping being distorted by my views of the phenomenon (Bowden, 2005).

3.5.3 Considerations related to the analytical approach

There has been some critique on the use of interviews or 'talk' as a way of collecting data. For example, Hallet (2014) questions the way in which research participants think about their experiences and asks how authentic is the capturing of such experiences? She argues that the "phenomenographic interview will not only capture variation in experience of a phenomenon, but also variation in intuition, insight and ways of thinking" (p. 211). This variation however is to be expected, due to the nature of phenomenographic studies (whereby hierarchies arise from such variation of understanding) and instead, variation was used to strengthen my research findings. This is correspondingly supported through my attempt to make the process of analysis transparent using bracketing. Bracketing is "the researchers attempt to the best of their ability to bracket their own views as they put themselves into other

people's positions and try to understand what it is that they see" (Bowden, 2000a, p. 21) and to ensure the focus is on the personal reality of the individual (ibid.). However, bracketing in this case was not applied in an attempt to remain completely unbiased (as this is not possible – see 3.2.1) but rather to try and not impose or import any preconceptions, ideas or theories onto the participants' descriptions of TEL innovation and TEQSA TS. Instead I took:

> *…no position on the correctness or falsity of the claims which are implicitly made by the research participant…[recognising] each individual as a separate case, a possibly unique world* (Ashworth & Lucas, 1998, p. 418).

Further, it is given that contexts, conditions and time may affect the way that interviewees respond to questioning. Notwithstanding, and in line with my study, "[t]he outcomes…represent the full possible ways of experiencing the phenomenon in question, at this particular point in time, for the population represented by the sample group collectively" (Akerlind, 2012, p. 116). This necessitated staying true to the phenomenographic methodological approach and only undertaking a single interview with each of the participants. I did not follow up with additional questions/interviews as the danger was that any further responses would not have directly related to the original interview questions. If further questioning was to occur, undue influence may have snuck into the data and analysis may have been tainted. Thus, it was important that I acquired as much relevant information as possible during the interview. Additionally, unlike Burns (1994) who suggests engaging participants in earlier stages of the analyses of data, I did not undertake member checking of interview transcripts, or findings from the analysis for a number of reasons and based on several viewpoints. First off, following Heidegger's hermeneutic ideals (wherein an experience of a phenomenon is influenced by its context), if I had re-questioned a participant's account of experience, the differing context-at-hand may have affected

the participant's rendering of the phenomenon. Secondly, in terms of participants checking for accuracy of representation of their specific individual experiences, issues may have arisen since the participant may not have comprehended how the analyses of the whole gave way to specific categories of description:

> *The categories were derived from a range of transcripts and not just their own... [and] once you begin any subsequent conversation about the analysis, you are introducing new material and you might expect any interviewee now to see the phenomenon differently (P. Green, 2005, p. 40).*

Instead, following an interpretive research perspective I believe that the credibility of the outcome of this analysis stands on its trustworthiness and rigour (and which is discussed next in this Chapter).

Finally, although it is suggested that the categories of description and outcome space be checked by others outside of the research to see if similar outcomes could be achieved, in my case this was not possible because colleagues were unfamiliar with phenomenographic methods and processes. I had a limited time period in which to complete my research and unfortunately, there was not enough time to allow colleagues to come up to par with my research approach and review findings. Yet Akerlind (2005b) indicates that there are a large number of existing high quality phenomenographic doctoral theses showing rigour, further showing that individual researchers can accomplish trustworthy research. She notes that "…an individual researcher can, at the least, make a substantial contribution to our understanding of a phenomenon, even if team-based research might have taken that understanding further" (p. 70). This too is what I hope to achieve.

3.6 Ensuring trustworthiness and rigour

Trustworthiness has developed within qualitative research to support findings 'credibility' 'transferability' and 'dependability' (Lincoln & Guba, 1985). Additionally,

trustworthiness is essential for building rigour within the research process (Collier-Reed et al., 2009). As is the case for many other qualitative studies, phenomenographic studies may have their trustworthiness and rigour questioned (Bruce, 1997; Cope, 2004; Sandbergh, 1997). In this section I discuss how I have worked on strengthening trustworthiness and rigour regarding my research findings.

As has been previously discussed, the aim of phenomenographic study is to discover the different ways of experiencing or perceiving a phenomenon and as such, it is the *discovery* aspect that is important. First off, I make note that exact replications of results found in my study may not be possible as the categories of description may be interpreted differently by researchers who may interpret or experience reality differently than myself (Burns, 1994; Säljö, 1997). A comparison of sorts is given by Marton (1994), who describes phenomenological findings as being much the same as discovering a new species of plant on a distant island- doing so is possible but may not be replicable on a different island, however the discovery is nonetheless important. Further, Akerlind (2005b) points out that resulting outcome spaces are not absolutely complete “with respect to the hypothetically complete range of ways of experiencing a phenomenon..[instead there are] more or less complete outcomes, not right or wrong outcomes" (p. 70). As a result, transferability is looked at differently by Phenomenographers, with trustworthiness being shown through the ability of other researchers to recognise the conceptions presented in the categories of description (Marton, 1986, 1994). I hope that this will also be the case in this study, and I intend to share my findings with EDs and others for that purpose.

Below is a summary of the strategies I undertook during the research process in support of trustworthiness and rigour.

- The research participants were chosen in an unbiased manner (Cope, 2004).
- I prepared and practiced for interviewing- I made sure to trial interview questions and my interview technique with a number of pre-study participants

to ensure I could interview in a phenomenographic way (see 3.4.4). Only then did I begin interviewing for 'real' (P. Green, 2005).

- I developed an open-ended but focused interviewing technique as discussed in the Collecting data section (P. Green, 2005).
- During interviews I employed strategies to avoid unplanned researcher impact- this involved such things as not interrupting a participant with my own ideas, summarising or re-phrasing participants statements without altering the words of the interviewee and/or staying quiet, and employing non-verbal ques that signified I was listening but not making judgements on what was being said (P. Green, 2005).
- Where I felt that I may have possibly prompted a participant, I discarded the associated data (P. Green, 2005).
- Not introducing any other data into the analyses other than that gained from the interviews, and in bracketing my ideas via memos, to make any background assumptions transparent and in allowing them to be criticised and then allowing myself to defend the research process and analysis (Bruce, 1994; Cope, 2004; Sandbergh, 1997).
- I was receptive to all and any findings that arose during the analysis stage and I tried not to force ideas/perceptions/concepts into specific categories (P. Green, 2005).
- Reading transcripts many times, and going back to the data many times to take note of the specific contexts, whilst taking cognisance of the data as a whole. Also trying to stay true to specific phrasing and in being as "faithful as possible to the individuals' conceptions of reality" (Sandbergh, 1997, p. 209).
- With analysis progressing through a process of iteration and presenting data (categories of description, outcome space) only after ascertaining carefully considered relationality (P. Green, 2005).

- Where relevant, to use illustrative excerpts from the transcripts as part of research findings (P. Green, 2005).

Additionally, and in line with Bruce's (1997, p. 106) research, my study is considered reliable and sound because it:

- demonstrates orientation towards the phenomenon…through the process of discovery and description;
- conforms to the knowledge interest of the research approach; and
- is communicable.

3.7 Conclusion

In this chapter, I clearly outlined the research approach and processes to ensure that the reader understands what I did and why, and in particular to strengthen my research findings and discussion. To do so I outlined my choice and use of Developmental Phenomenography, discussed the research design including the four research questions, and choice of participants for the study. I also detailed the analysis process and gave a critique of this. Finally, I outlined how I have ensured trustworthiness and rigour, particularly the steps taken to do so.

In the following chapter I introduce the findings, and explain how it is to be represented in chapters four to seven. I also present findings of outcome space one.

Chapter 4 Outcome Spaces and Variances in Educational Designers Understandings and Experiences

Often the biggest barrier to innovation Is our own way of thinking.

George Couros

4.1 Introduction

In this Chapter I explain research findings, described here as "outcome spaces". These spaces consist of, and hence are represented by, Categories of Description (CoD). Each outcome space consists of different ways of experiencing the phenomenon under study and, as a collective, shape that phenomenon. For this study, I chose to represent the outcome spaces as tables (see also Barrie, 2003). The tables present inclusive, hierarchical, outcome spaces in which the categories further up the hierarchy include the previous, or lower categories (Laurillard, 2013). These categories also depict a logical relationship with all other CoDs and set out to explain what the variations in understanding are. As was discussed in Chapter 3, Phenomenography takes a non-dualistic ontological stance and as such, different ways of experiencing a phenomenon are internally related (Akerlind, 2010). Therefore, each CoD representing the qualitatively different ways of understanding the phenomenon constitute "more or less complete experiences of the phenomenon, rather than different and unrelated experiences" (p. 380). Of note, in a Phenomenographic approach it is not necessary to represent all the possible variations in the phenomenon that may be experienced, rather the focus is on the experience of the individuals within the study. Similarly to Akerlind (2010), I also aimed to have "at least some of the transcripts from which particular categories of description were constituted [showing] some reference to aspects of…development present in categories lower in the hierarchy, but not vice versa" (p. 380). What's more, this study, much the same as other Phenomenographic studies, only focuses on the aspects of experience that are critical in distinguishing qualitatively different

ways of experiencing to highlight structural relationships and hence, also highlighting the variation in experiences (Akerlind, 2005b). In doing so, rather than describing EDs many differing experiences which would water down the critical aspects, I was able to use focussed understandings for suggestions to EDs regarding TEL innovation and to uncover aspects that may be restricting the transformation of education.

Lastly, it is important to note that:

> *…not only is a category of description not equivalent to the meaning expressed in any one transcript, but the meaning expressed in a transcript is not equivalent to the meaning experienced by the interview participant…the categories have been constituted from an analysis of all of the transcripts, as a group…no one transcript can be understood in isolation and can only be interpreted in comparison with the rest of the group of transcripts (Akerlind et al., 2005b, p. 81).*

4.2 Representation of the findings

This and Chapters five through to seven will now focus on representing the findings and will be structured as follows:

1. An overview of the phenomenon being investigated via the question(s) asked of the EDs.

2. Tables that presents the outcome space and distribution of EDs understandings/experiences within the outcome space.

3. A discussion of each CoD (as depicted by its label) in terms of the referential and structural aspects and place in the hierarchy. Each CoD discussion will include selected quotes from EDs to illustrate understandings and experiences.

4. A discussion of the interrelated but hierarchical nature of the CoDs.

5. An overview of the referential aspects of the outcome space.

Figure 4.1 represents the four outcome spaces, which resulted from the analysis and that will be covered in more detail in this and chapters five, six and seven. It shows how each outcome space is inclusive of ‘what’ was experienced (the meaning or the ‘referential’ aspects), and “how” it was experienced (the ‘structural’ aspect of meaning), which were discovered during the analysis of responses to the posed four research questions (see 1.3). This is relevant as “ the meaning and structure of human awareness are seen as dialectically intertwined, in that they mutually constitute each other” and “[c]onsequently, all phenomenographers should emphasise both meaning and structure in their analysis of ways of experiencing a phenomenon” (G. Akerlind, J. Bowden, & D. Green, 2005a)

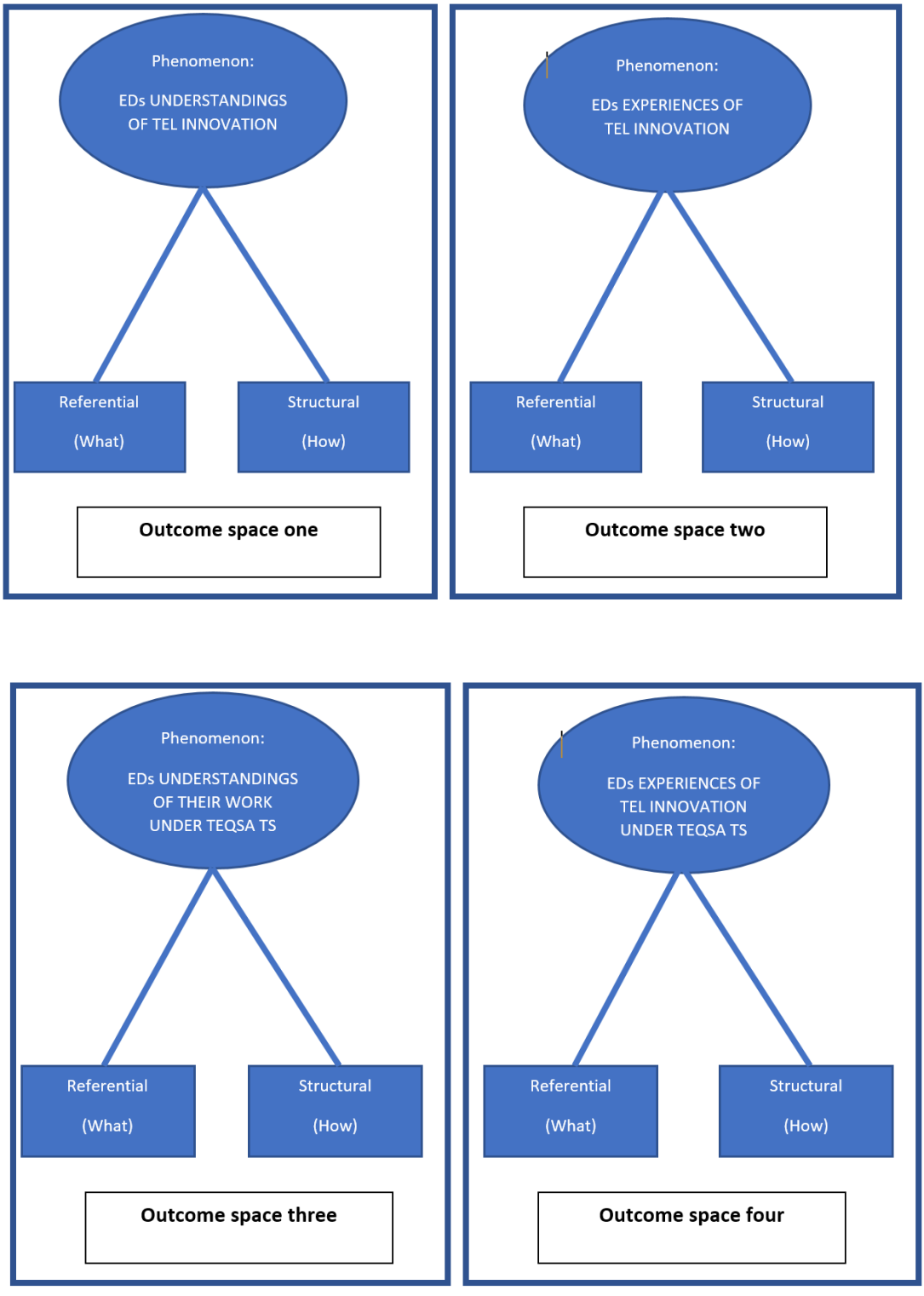

Figure 4.1 Representation of results as four outcome spaces

The overview of chapters and their foci are as follows:

Chapter four describes outcome space 1: EDs understandings of TEL innovation.

Chapter five describes outcome space 2: EDs experiences of TEL innovation in practice.

Chapter six describes outcome space 3: EDs understandings of their TEL work under TEQSA TS.

Chapter seven describes outcome space 4: EDs experiences of innovating with TEL under TEQSA TS.

Chapter eight outlines how TEL innovation is generally understood and experienced and as related to experiences under TEQSA TS. The aim here is to discuss the relationships between, and cross reference referential aspects across, the four CoDs.

4.3 Outcome Space 1: How Educational Designers understand TEL innovation

This outcome space represents the understanding of interview question two: Please tell me what innovation in TEL means to you? (see Appendix 1).

The question was asked to get an understanding of how EDs conceptualise innovation in TEL, but firstly on a theoretical level. Such understandings will be later related to how they experience TEL innovation in practice, both generally and under TEQSA TS (see Chapter eight). Similar to what was mentioned in literature (see 2.2), several EDs mentioned the subjectivity of TEL and TEL innovation. This subjectivity is what this study wishes to recognise and acknowledge given its ontological stance, that is, there is an “expectation that different ways of experiencing will be logically related through the common phenomenon being experienced” (Akerlind, 2005b, p.

72). Nonetheless, all EDs could give their understandings, which are depicted in Table 4.1 below, with referential aspects labelled as:

1. Background understandings (A)
2. Alternative understandings (B)
3. Suitability understandings (C)
4. Quality understandings (D)
5. Fundamental change understandings (E)

These understandings will be discussed individually in terms of their structural and referential aspects, with added quotes illustrating the understandings. Table 4.2 summaries Table 4.1 and depicts the distribution of EDs in each level/category.

NOTE: Within chapters four to eight I have included the sum of EDs that each CoD contained, not to emphasise quantification of findings, but rather to represent a picture of the understandings and experiences across the space. I also recognise that readers may be interested in such quantitative results and include it solely for purposes of "noting". Readers can make their own judgement on what those numbers mean, but should consider that the focus of this study is on the hierarchical nature of the collective understandings and experiences.

				REFERENTIAL ASPECTS (The meaning or understanding)		
				Maintained	**Enhanced**	**Transformed**
				TEL innovation does not improve learning per se	Learning is improved by innovations in TEL	Learning is transformed by innovations in TEL
STRUCTURAL ASPECTS (Internal and external)	**PRE-STAGE**	**Inconsequential**	Foreground: Initially, no aspect of TEL innovation is in the foreground as it is the improvement in pedagogy that is considered important	1. Good pedagogy lays a foundation to learning and technology is relegated to the **background (A)**		
	FIRST STAGE	**Simplistic**	Foreground: Technology is a tool that can be used for learning and teaching purposes	2. Any technology that is new or different, or any existing technology that is used for new learning contexts is said to be innovative, it provides an **alternative** to other means **(B)**		
		Determinist	Foreground: Technology needs to do the job it is intended to do, with minimum disruption and costs	3. Technology that provides **suitability** or is 'fit for purpose' and can be relied upon **(C)**		
	SECOND STAGE	**Appraised**	Foreground: Learning and teaching must be improved by use of the technology if it is to be innovative, however the essence of learning remains the same		4. Technology must add value and improve the **quality** of learning, mainly in the form of improvements for learners e.g. experiences, engagement **(D)**	
		Visionary	Foreground: Educational processes and practices can be re-imagined through the use of technology			5. Enabling learning through technology: learning cannot occur without it, technology causes **fundamental changes (E)**

Table 4.1 Outcome space one: EDs understandings of TEL innovation

	Understanding of TEL innovation				
	A	**B**	**C**	**D**	**E**
	Pre-stage	**First Stage**		**Second Stage**	
No. of participants (counted at highest level of understanding)[10]	1	4	4	15	2
	TEL innovation is maintained			**TEL innovation enhances learning**	**TEL innovation transforms learning**
Total No. of participants with the understanding	9			15	2

Table 4.2: A summary of the distribution of EDs understandings within Outcome Space One.

4.3.1 Background understandings (A)

The EDs that indicated a background understanding of TEL innovation gave several reasons, but commonality lay around understanding pedagogy. The general conception was that innovation should not focus on technology but rather that of good pedagogy. Some EDs wanted to stress that technology did not have to be involved at all:

> *I get a very resistant reaction to innovation and technology together. Because to me, innovation doesn't mean technology, technology doesn't mean innovation. Even though I'm labelled as a technology person, I by no means feel myself as one. I repeat my main concern is*

[10] EDs who contributed to more than one category of understanding were counted at their highest level.

good pedagogy, whether the technology can assist with that are not. It really depends on a particular situation. [PT07]

Innovation doesn't mean you have to play with the latest new sparkly shiny thing. Innovation can be around just a new approach, strategy, or pedagogy using whatever is already existing. [PT08]

Another related aspect of this CoD was that learning needs to be based on good pedagogy before technology use could be considered. These EDs believed that TEL innovation was a possibility, but it was expected that any issues with the pedagogy of online units/courses would be rectified beforehand:

I suppose my catch cry will always be it has to be led by pedagogy and sound curriculum design. [PT08]

[GA][11] So you say you are really focusing on the pedagogical side of things?

Yes, the pedagogy, definitely. And within that, because until you have that, it's very hard to think through the sorts of tools, or the way you might use tools, if you're not really sure why that's appropriate. So, once we have the academic thinking through why they're doing things or what they want students to be doing, we can then implement interesting ideas. [PT 13]

As such, EDs believed that when first considering the learning situation, good or appropriate pedagogy is in the foreground of this understanding and that the use of technology is marginal to the structure of awareness and is *inconsequential* at that stage.

In terms of the referential aspects, the meaning associated with this understanding of TEL innovation is that using technology to enhance learning is not necessarily

[11] [GA] represents the question I asked of the ED

important when first considering learning situations. The most important aspect of EDs at this stage is to consider the pedagogy and determine *what* needs to be addressed, rather than *how* it will be addressed.

4.3.2 Alternative understandings (B)

EDs in this category expressed understandings of TEL innovation as using new, different or alternative technology for learning, or in using existing technology for new learning experiences. There wasn't a focus on improvement of learning per se, rather it was the newness or its different use that was considered innovative:

> *The first thing I thought of is that it's about creating variety in the way that we present our materials and creating variety in the student experience using educational technology to kind of, present unit materials differently. [PT02]*

> *I think as we move more into online learning, I think we need to use technologies to try and replicate what happens in a face-to-face environment, whilst still having the same experiences. [PT08]*

What is in the foreground of this structure of awareness is the understanding of technology as tools for use in whatever manner we see fit. The tools themselves have affordances that enable them to be used in particular circumstances, and for particular reasons, and hence the focus is on minimal disruption of teaching and learning. Technologies are thus looked at as being as part of a suite of tools that the institute can choose from to offer variety in teaching and learning:

> *In terms of technology, I always look at the simplest technologies. People are always reluctant, even I am reluctant to use new technology, and I'm relatively technology savvy. So certainly not coming to it from the point of view, 'I want to use new technologies', in fact I want to avoid using new technologies and [instead] use the things*

that people are comfortable with for new purposes…Using familiar tools, but using them in different purposes. [PT07]

[GA] Why 3-D printing?

Because it was there. Because there was an opportunity…And to me as I prefaced at the start, I saw it as a new form of media…So, it was a natural one for me. Why not? It's something fun. It's something that I have got the knowledge for, but it was more the vision. Now I'm working with, and this is being done with Chiro and Anatomy, I'm doing bones and skeleton stuff. We're doing rock samples with the sciences. We're doing all kinds of things which now are afforded by having this platform. [PA22]

In these cases, the learning itself is not improved but rather tools are used in new or different ways to support teaching and learning. These understandings are different from the first category in that in this category, technology innovation itself is in the foreground however not necessarily for *improving* learning. These understandings are *simplistic* understandings rather than inconsequential to teaching and learning, that is, for the Background category, technology is not considered important (at least initially) for teaching and learning. The appearance of *using* innovative technology for teaching and learning is the key defining difference between this and the former understanding.

You are forming an idea, you're forming a process around something you want to do in learning and teaching. And then you find the technology, rather than technology constraining you and so you come up with what you want to do and go see about finding a technology that will assist you in what you want to do. Or, you build something…rather than get bogged down in a specific system, looking at what you want to do first and then going and finding, I think that's probably more the way

> *I see innovation around technology and learning and teaching…to achieve an answer to a problem. [PT06]*

In the above quote, pedagogy again factors first, before considering the technology. The referential aspect within this category is similar to the Background category in that, innovation in TEL is not conceived as that which improves learning but again, the learning context of the institute is maintained at an appropriate level and quality of learning is maintained.

4.3.3 Suitability Understandings (C)

EDs understood TEL innovation in this CoD as that which is suitable to the educational issue at hand, that is, technology should be 'fit-for-purpose'. In other words, for technology enhanced learning to be innovative, the technology must be well equipped or well suited for its designated role or purpose. Again, improving learning is not immediately the purpose of using the technology but rather that it must assist learning and maintain it, at an acceptable level or standard.

> *So, we look at it like, what are we trying to achieve from a teaching and learning perspective and how can we do it? Fine, video is good for that, synchronous discussion is good for that. VR is probably one of the novelist things I think and will have a lot of application for anything…but if I was putting it in, I'm not going to use stuff that doesn't, just to be seen as innovative. It has got to be fit for that purpose. A novel use to me is just having that use that fits the requirements of the particular scenario we are working out at that time. [PT23]*

In the foreground of this CoD is the institutional want of minimising risk and costs and the need to work with technology that provides best fit for a particular pre-determined learning need. Further, that by using a fit-for-purpose technology, there is some sort

of guarantee that it will give the desired outcomes. This idea lends itself to a *determinist* approach. The technology should be used to suit existing pedagogy and the technology itself does not need to be cutting edge.

> *My personal working definition is that what you're trying to do is apply best practice and it has to be fit-for-purpose. Not the bees-knees, or what somebody is doing that month that might be good for what they're doing but not necessarily fit-for-your purpose. So being innovative to me means seeking out best practice and applying it in your particular context. [PT10]*

The difference with the structure of awareness from the previous CoD is that in this case there is awareness that the use of technology can cause disruptions and are costly to the institute, and as such, the EDs wish to assure all that it can do the job it is intended for. In some cases, there was a sense that new untried technologies are not worth the risk.

> *I do know what's available, but I'm not necessarily going to implement if it is not fit-for-purpose. I keep up on a lot of the VR stuff. I mean a lot of innovative things could be very useful in the future, but it's not quite there yet. Just my experience to, I'm getting pretty good at identifying if the technologies are not quite there yet, if it's not worth putting your time in. I voraciously read and keep up with developments. Not just in the e-learning world, but tech generally. [PT26]*

This CoD has a referential aspect similar to the last two CoDs in that it is still maintaining a certain level of learning but not improving it per se. The structure of awareness of EDs in this case is the need to remove barriers and decrease risk of using technology whilst enabling learning:

> *…it is something that people are comfortable with…We've had more advanced technologies available that would require people to*

> *download and get to know them. That's an extra barrier. What do we want them to do? We want to talk and see each other really. For that purpose, Skype works fine, so why get people do the extra effort in learning something new? It's more sustainable as well. [PT07]*

4.3.4 Quality understandings (D)

EDs, who had understandings of TEL innovation as that which added value or improved quality of teaching and learning, make up this CoD. The meanings ascribed here mainly relate to improving learners' experience or their engagement with learning.

> *…people will tell us we're doing innovative projects. Some of those personally, I often think are just trying to keep up with whatever the latest flavour is and it's not necessarily enhancing learning, it's just giving us an opportunity to play with some new buzzy technology. Because we're doing that we say, 'look at us we're being really innovative' but oftentimes we're not actually looking back and saying, 'well what has improved, what is better, because we're doing this?' And the core of that is the learning. Possibly nowadays the idea of the student experience associated with that. But I have some issues with experience, if we're not also looking at the learning at the same time. So, you've got to make sure that the learning is happening. [PT10]*

The above understanding also brings in the issue of a lack of evaluation of TEL once the technology has been introduced.

In some instances, the use of technology was also attributed to improving the experience of the academics responsible for teaching online units.

> *It's looking at ways new or different ways of doing something, in the learning teaching context, that's supported by technology, and is*

> *adding value. And both from a technology perspective and a learning perspective, student teacher interaction, and in terms of innovation, it's about doing something that could be deemed as new, but different, even just slightly different and using technology as a way of enhancing that. [PT16]*

The structural aspects in this CoD is that of becoming increasingly aware of the need to both improve learning experiences and engagement for students and academics, and the possibility of technology to assist this. Technology can be new to that institution, or it can be an existing technology that is used for a different purpose, as long as it improves the learners' and/or academics engagement and/or experience it is said to be innovative. It involves *appraisal* of the technology.

> *I suppose innovation in technology is knowing when not to use something because its new and cool, and really truly thinking about the students that you're teaching and what the learning outcomes are and how you can do it in a way that is going to have maximum impact and improve things, rather than just deciding you're going to use a bit of technology, because it's there and cool. [PT18]*

The referential aspect differs from the previous three CoDs in that there must be enhancement with the learning, and that technology has helped with that:

> *We employ technology for all sorts of things. I commute by bicycle, so I am using the technology of a bicycle, which means I can get from A to B, which is my purpose, and with less time. So that's the enhancement, saving time…people do it all time, we use technologies to do things. I suppose the innovation part is where you are seeking out to make sure you are doing the best can you with the technologies that you're employing really, which for me, I've recently learnt that does help to service your bike on a fairly regular basis. [PT10]*

This is different to the previous CoDs, which have not focussed on the improvement of learning but rather on aspects of maintaining the pedagogy, the use of new technologies or their use differently, or in assuring a good fit with technology.

4.3.5 Fundamental change (E)

In this structure of awareness, the focus is on how technology enables learning in ways that could not be achieved without the technology. It is seen to transform learning, not just the improvement of students' experiences and engagement, but the very way in which learning occurs:

> *I guess at the simplest its means finding a technological tool that will enable someone to improve upon the practice and to innovate in that space, to do learning and teaching in a different way, which they couldn't do without the technology. [PT23]*

> *I think, language is really important and enhanced learning, it's like technology its enhancing it, well it's not, it's changing it. [PT22]*

In the foreground in this structure of awareness is the ability of technology to change the nature of learning. This means new educative things are possible with technology, although the technology does not necessarily govern what can be done. The ED takes a *visionary* approach to innovating. In this case, technology must also improve the actual learning and teaching process and practices:

> *…but then you bring in an active learning space- that space is a technology. So, you're enhancing learning by using that space. That's a different thing as well. So, it's the whole, I guess clime of all those different things that I would describe, innovation is how you approach your learning with that in mind. How we are revitalizing what we do. [PT22]*

In terms of the referential aspects, learning practices and processes are transformed using technology. This is different to the previous CoD as the precedent conceived learning as undertaking the same kinds of learning and teaching practices and processes albeit in improved ways. The meaning attributed here is to the fundamental changes with learning, with it being transformed by technology:

> *It's technology mediated learning, or its technology enabled learning. There's different ways to look at that, but it's like we have learning, and now we enhance it with technology. Linguistically, that's quite a binary, that there is something that we are making better. I think it's actually been transformed. [PT22]*

4.4 An overview of the hierarchical structure of the first outcome space

For this outcome space, five differing CoDs were identified and described. They were arranged in a hierarchical manner with the higher levels subsuming the understandings of the lower levels. The first level described the EDs understanding that it was necessary to have good pedagogy in place before technology is considered. Technology became *backgrounded* and was not part of the structural awareness at this stage, and hence TEL innovation is inconsequential to their work. The second level saw technology entering the awareness of EDs but was understood simplistically as that of a tool. Learning itself was not improved, rather a new technological tool, or an existing tool was used for a different or *alternative* learning purpose. The third level saw the understanding of participants linked to technology being 'fit-for-purpose' and therefore able to achieve the desired outcomes (a deterministic approach). Again, the improvement of learning was not at the forefront but rather the *suitability* of technology to sustain learning. Hence, the use of technology innovation for improved learning was not evolving in any sense. The fourth level consisted of understandings of TEL innovation that required learning to be improved, mainly in the form of student engagement and students' and

academics' learning experiences. This *quality* improvement of learning via the appraisal and use of technology is what has defined the variation at this level. The fifth and last level consists of more complex and visionary understandings of technology being able to transform learning, whilst the very nature of learning is *fundamentally* changed because of technology.

The CoDs all have learning at the heart of their structure of awareness, but they differ in their structural and referential aspects, with higher levels having more complex conceptions and leading to the fifth level that aspires thinking about a learning revolution. In conclusion, the CoDs show differing ways of understanding the phenomenon but there is also a logical relationship.

In summary, the hierarchy goes from EDs not seeing technology as being the focus of innovating (level one), to innovation being technology that is new or different, or any existing technology that is used for new learning contexts (level two), to technology add value and improving the quality of learning (level three) and lastly, technology transforming learning (level four).

4.5 Conclusion

This chapter has presented data as outcome spaces, and which consist of various categories of description. In outcome space one, there were five different categories of description, namely Background understandings, Alternative understandings, Suitability understandings, Quality understandings, and, Fundamental change understandings. These understandings were discussed as according to five structural aspects: Inconsequential, Simplistic, Determinist, Appraised and, Visionary aspects.

Within each CoD I explained how the structural aspects framed how the ED understood TEL innovation and how categories further up the hierarchy included the lower categories. By doing so I was able to clearly state the variations between the

categories. Outlining the referential aspects in this outcome space helped show the variances between the CoDs and these were then grouped according to those variances. They were labelled as being Maintained, Enhanced or, Transformed.

In the next chapter, I move onto representing findings of outcome space two, that of how EDs experience TEL innovation.

Chapter 5 Outcome Space Two: How Do ED's Experience TEL Innovation

It is only when we forget all our learning that we begin to know.

Henry David Thoreau

5.1 Introduction

This Chapter follows on from the previous Chapter and will present the findings of outcome space two. This outcome space is related to the research question of: How do EDs' experience TEL innovation?

Additionally, the findings will be linked in Chapter eight with *how* EDs experience TEL in practice and under that of TEQSA TS. The interview questions that mainly prompted responses to the research question were:

Based on your experiences, what innovative work have you done recently involving TEL?

Can you give me a concrete example of your innovation with TEL?

And/or

Why has innovation not been possible?

And/or

Why did you do it that way?

And/or

What were you hoping to achieve?

There were also some responses that were gained from the fifth interview question:

Do you envisage what you're doing to innovate changing over time? Why/why not?

The responses helped to show how TEL innovation was experienced rather than how it is conceptualised, and gave a better perception of what is happening 'on-the-ground'.

Analysis of this data resulted in four understandings, labelled by their referential aspects:

1. Status quo
2. Opportunistic
3. Directed
4. Driven

The outcome space is illustrated in Figure 5.1 below. Again, these understandings will be discussed individually in terms of their structural and referential aspects, with added quotes illustrating the understandings. Table 5.2 gives a summary and a picture of the distribution of understandings of EDs across the structure of awareness (see 4.3 for discussion of the Table's inclusion).

I also include a list of the examples of TEL innovations mentioned by the EDs (See Appendix 4), for further discussion in Chapter nine.

5.2 Outcome space two: How do EDs experience TEL innovation in practice?

		Referential (The meaning or understanding)			
			Sustaining	**Constraining**	**Influencing**
			TEL innovation is not occurring	TEL innovation is constrained	TEL innovation occurs because of positive influencers
STRUCTURAL ASPECTS (Internal and external)	**Inactive**	Foreground: innovation is not done or personal constructs refute the possibility	1. TEL innovation is at **status quo**		
	Active	Foreground: TEL innovation occurs when academics are willing and able to work with the ED		2. TEL innovation is **opportunistic**	
	Taking charge	Foreground: Institutional strategies and policies direct TEL innovation and EDs involvement in them. EDs focus on project work.		3. TEL innovation is **directed** and mainly project based	
		Foreground: EDs have created ways of innovating with TEL and their uptake			4. TEL innovation is **driven**

Figure 5.1 Outcome space two: EDs' experiences of TEL innovation in context.

	How is TEL innovation experienced			
	Inactive	**Active**	**Taking charge**	
	1	**2**	**3**	**4**
No of participants (by highest level)	1	4	19	2
	TEL innovation is being Sustained	**TEL innovation is being Constrained**		**TEL innovation is being Influenced**
No of participants	1	23		2

Table 5.2 A summary of the distribution of EDs understandings within Outcome Space Two.

5.2.1 Level one: Status quo

With this level, EDs expressed themselves as not innovating with TEL. They were effectively *inactive* in that space due to a number of institutional and personal reasons. It could be said that they were maintaining a status quo with regards to TEL innovation.

[GA] Can you give me a concrete example of your innovation with TEL?

No, not really. Not that I can think of. We do things that are no longer innovative. With, like mobile apps and you know, making it mobile. They're all just bits of software really in the end. I'm just trying to think...anything that would be considered innovative… probably not what I'm supposed to say!

Innovative I think, you need to actually be attached to the entire unit of study for the session that it runs. Need to be involved in the teaching. I think the innovative bit comes in with teaching, not with the designing and the creating of an app, or creating of the resources. The innovative bit is actually trying to get student to engage with it and come out at the end with a bunch of analytics and go, "look, my

> *goodness" they actually engaged, or they actually rose 4 points or something. That would be the innovative bit, I would imagine. [PA05]*

In the above quote, the ED also understood their role as not of innovating, but rather it is the educator who has that opportunity.

Other understandings revolved around the EDs view on innovation generally:

> *To be honest I'm very sceptical about the word innovation. We are called the [xxxx unit], and having done a PhD, if there's one thing I've learnt, there is really no innovation per se. There is nothing new. It's a collection of existing ideas, the way you put them together. So, to me personally, innovation is an improvement on whatever it is. [PA07]*

In other cases, it was more of a case of the general state of innovation and where a ED considered their institution was placed as compared to others:

> *When I think of innovation, applying it here with back in 2011, not many people knew what a portfolio was, or an E portfolio anyway. They knew what a hard copy was, in education and in arts and design. So, I think I find it difficult to think of true innovation in learning technology in the Higher Ed sector locally. [PA12]*

> *So, for each individual academic, what is innovative to them is very rarely what I would see as being innovative. More generally, in terms of across the sector, or in terms of across university education globally, what we're doing here at [this university], is rarely cutting-edge. [PA13]*

Hence, in the foreground of the EDs in this structure of awareness was the understanding that they were not involved with any innovative TEL work or that TEL work within the institute could not be called innovative. The referential aspect in this structure of awareness was therefore that of sustaining the status quo. Some EDs therefore looked to work with whatever technology the institute already had:

In terms of tools and stuff like that, a lot of the time in this role it's about what you can make work because we don't have a lot of funding or additional resources to bring in, like a programmer or a web developer in that sense.

The whole situation has changed. It's been restructured [in this university], which is why in terms of using specific tools, or developing specific online resources within the groups, it tends to be, as I said, from a sustainability perspective, but also what you can do with what you've got. [PA13]

It's just more innovative than what other platforms have been delivering. And what the LMS delivers. Although if you have access to like the premium version of the LMS, I think there is a lot of stuff that we could do. But as we don't have that, we have to deal with what we do have. [PA25]

5.2.2 Level two: Opportunistic

At this level, EDs saw TEL innovation happening on an opportunistic basis and as related to where conditions were favourable. They were then *actively* innovating where and when possible. In the below examples, the innovation has been sparked by random contacts with academics:

Sometimes when I'm embedded in the faculty and I have a staff member that walks past, and they don't really know me…I will introduce myself and then sometimes my colleagues will introduce me as well and mention a couple things that I could help them have a think about. And sometimes I also mention some tools that are within the LMS. [PA25]

…and looking at opportunities that present themselves like, for example, next week I'm having a meeting with one of our virtual reality

> *guys here, because we thought we could do something really interesting with one of the [xxxx] courses in [XXXX program]. [PA26]*

Sometimes the ED will hope opportunities will come their way by of word of mouth:

> *…word-of-mouth is huge here. It doesn't take long for something to get around 'oh so-and-so has done this, you should look at it!' Then all of a sudden, I'm getting phone calls saying, 'I've seen this and that, but I want to do something slightly different, what do you reckon?'. So, then I'll toddle off and have a chat with them and see how we go. [PA14]*

What is in the foreground of EDs in this CoD is that opportunities rest on working with academics, and it is only when they are willing and able that innovative TEL activities occur. When that is not the case, TEL innovation is stalled:

> *You can't use [the TEL innovation] because the unit convenor is on leave, so their welcome video is no longer useful. Or, the new unit convenor doesn't want to participate, or that new unit convenor is not actually on-board until a couple of days before session starts. So, they don't have time, they don't have a vested interest in putting that in there. [PA04]*

> *There are always other academics where I will sit down and talk to them and they, at the time, seemed very excited and then when I followed-up, they were like, you know, they have no time to do anything, or we're just going to run with it again. Or, maybe just change the assessments. [PA03]*

The referential aspect in this outcome space therefore, shows the ability to innovate with TEL, but that the opportunities are constrained. Some of these constraints might also be with the institution itself and involving such issues as financial sustainability:

> *It's a beautiful looking module, but is not sustainable…it's not about the student. The students experience is a great experience all the time. But for the amount of work for us [and the] team, to support that financially as well. When you look at the hours of editing, when you've got media production et cetera and then our time for consulting with the academic staff members and then putting it all together and putting it in for a period of two weeks for a session that may never be used again, it's not necessarily financially viable. It really doesn't stack up. So, we're sort of looking at other ways. [PA04]*

The difference between referential aspects to the previous is that in this CoD, EDs believe they are innovating, whilst in the previous CoD they did not think so. Hence, this CoD describes an understanding of TEL innovation being constrained and consequently, EDs needing to look for ways of innovating, which is said to occur opportunistically.

5.2.3 Level three: Directed

Some EDs considered TEL innovation happening through projects, directed by strategies, and as allocated by their management, where someone or something was *taking charge* on what gets done. EDs working on individual academic's tasks or activities were not seen as an ideal way for undertaking innovation, at least not in a sustainable or maintainable way. The priorities of the institute or its schools/faculties/units were understood as directing innovations. These projects were seen as one way that innovation could be controlled and managed as per institutional goals/aims.

> *It was decided on high that every unit would have…an online presence. [PA14]*

> *Strategically, the projects come from the top down in terms of where [this university] is going in the next so many years, and then it's filtered down from there. For example, at the moment we've got a new PVC in business. She's looking at several key areas, getting people to put together strategies on teaching and learning, research engagement, et cetera. It kind of filters down in terms of this is the bigger picture for [us]…these are the areas that apply to this school, et cetera, or what our focus will be, and then down to our level, regarding how we are going to do it. [PA16]*

Institutional policies and strategies were also nominated as being instrumental to the EDs and their TEL innovation planning, they effectively gave indications of what should be aimed for:

> *The University has its strategic plan…we now have a new learning and teaching plan, called [XXXX] so yes, a lot of our ideas will definitely be guided by that…So, definitely strategic thinking, strategic plans all come out of the university…and that sort of filters from the top down. [PA08]*

Formal projects that were developed by the institution and which EDs were either part of from the beginning, or were co-opted into, also very much guided what EDs did in their work:

> *So yes, people do ring you…they either get projects, so the central team does projects for the faculty, so the faculty will say, 'I need a website for the higher degree research students'…I've done a website for higher degree research students…So they were like, do that. [PA05]*

The structural aspects for this CoD are the belief that innovation is possible, but mainly via institutional level strategies or projects. The EDs are to follow directions as

set out by managers and be guided by institutional policies. However, they will have the resources and the impetus to operationalise the innovation, which is seen positively by the EDs.

> *Another big challenge, if we want to innovate with new technologies we need to resource that process much, much better. Because it takes a huge amount of time to innovate. If you are going to be innovative, you need a huge amount of lead in time. So, we've had quite a successful MOOC that has been run, the [XXXX] MOOC. The amount of time and resources, I think it was nearly a year or so, and a team of people working towards that. Yes, that's been successful, but time and resources were used to enable that to happen and its very challenging to have a lot of success and innovation, if the resources aren't put at the front end to enable that to happen. [PT13]*

The difference with this and the previous referential aspects is that EDs here have formalised avenues to innovate, whereas for the previous, there is less formalised routes to innovate, and less resourcing available. Therefore, there are formal channels and authorisation for EDs to innovate.

5.2.4 Level four: Driven

Several EDs understood TEL innovation as being something that could be driven, in this case by the EDs themselves. The EDs felt that although there could be constraints placed on their work, they could still manage to innovate through certain strategies.

> *But the interest there, partly is that you allow innovation to self-seed. So, what we're doing, we're learning how to use the printer ourselves and then we'll just pop it downstairs with the Rovers, and teach them how to print and maintain it. And students will just come in and print whatever. So, innovation will grow just from students looking at this*

thing in the middle of the room printing, and inspiring them to go, 'oh, I wonder what I can print? [PA12]

…I've certainly got the ability to, like the [XXXX] module, if I see a need for something, within the University, I can actually move forward with that and get some resources and possibly some people if I need to and create an artefact, or create a new strategy. A lot of time I like to see what's out there. I suppose I facilitate a lot. I know one person is doing something in one area, another person is doing something in another area, they can be useful to each other, so I bring them together and as a group, we look at what they're doing and how they might benefit everyone. It's just a nice place to be! [PT14]

The structural aspect is that EDs *take charge* and drive TEL innovation through their perseverance and adaptability to their contexts:

[GA] Seems to me that you are continuously moving forward and like you said, given opportunities to play and experiment and take risks. What is your feeling about how that's happened?

OK so I'll put it really simply, because I deliver things. If you deliver something, you are given opportunities. I think that's how it happens really. If you look at people in our role, there's the, I don't want to be nasty, but some people don't deliver a lot of things, and some do. It's like the ones that do are given more things. It's the old adage that if you want something done, ask a busy person to do it! Because they do things, they deliver things. How I do it personally? I think I keep delivering things. I think that's it. I come from a [XXXX] background, a freelance background where the term 'you are only as good as the last thing you did' is quite real. That's a client relationship. It's easy to move from a success to another thing. It's very hard to move from a failure to another thing and walk back from that. And like I said, discovery,

> *delivery isn't always a product, delivery isn't always a positive outcome. But delivery is a coherent outcome. The fact that we failed, and this is what we learnt is delivery! If you add that this is what we learnt, and this is what we will do different next time. [PT22].*

In all the above illustrations, the EDs have taken some control over innovating with TEL and are sustaining good reputations and in being seen as people who can get things done. There is also an element of self-actualising in that they are motivated to innovate, and knowledgeable about how to get it done. The referential dimension therefore is one where they are influential in the process of innovating with TEL. This is different to the previous CoD as the individual rather than the idea of a project is driving the innovation, and the ED has a sense of ability and self-confidence to do so.

5.3 Overview of the hierarchy of categories of description in the second outcome space

Four categories of description formed the hierarchy in the second outcome space. Once again, the higher levels subsume the lower levels and show greater abilities for innovating with TEL.

In the first level, EDs are inactive and not innovating with TEL due to a number of personal constructs of what TEL innovation is, and/or due to constraints imposed by their institutes. They are therefore understood to be maintaining a TEL *status quo*. In the second level, TEL innovation is actively occurring but only *opportunistically*, inter alia, where and when academics are willing and able to work with the ED. TEL innovation is thus seen to be done sporadically and at the mercy of a number of different factors. The third level of the structure of awareness is where TEL innovation occurs in a more organised and managed way, with innovation being *directed* by managers (who take charge of these) and the institute (schools/faculties/units). It may occur via projects, which in themselves have

allocated functions and resources to achieve outcomes. Policies and strategies also form the backbone to these projects. Lastly, level four proposed that TEL innovation is enabled through the motivation and reputation of the ED, with them being recognised as being able to get innovation going at their institution. The EDs themselves take charge and *drive* TEL innovation, and they make things happen because of their self-confidence, experience and clout.

In summary, the hierarchy goes from EDs not innovating with TEL (level one), to innovating opportunistically (level two), to EDs innovating through directed but individually constrained means (level three) and lastly, EDs driving innovation and in influencing the direction of innovation (level four).

5.4 Conclusion

This chapter has presented findings from outcome space two, or how EDs experienced TEL innovation. In this outcome space, there were four different categories of description, namely Status quo, Opportunistic, Directed and, Driven experiences. These were discussed as according to five structural aspects: Inactive, Active and, Taking charge aspects.

The referential aspects in this outcome space helped show the variances between the CoDs and grouped them according to those variances. They were labelled as being Sustaining, Constraining or, Influencing.

The next Chapter, Chapter six, will present the findings of outcome space three: how do EDs view their work under TEQSA's threshold standards.

Chapter 6 Outcome Space Three: How do Educational Designer's Understand their work Under TEQSA Threshold Standards?

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has.

Margaret Mead

6.1. Introduction

In this Chapter, the focus is on EDs understandings of their work under that of TEQSA TS. The understandings have been analysed to relate EDs work to the requirements of TEQSA TS. To do so, the analysis relates to the following research question:

How is TEL innovation experienced under the TEQSA threshold standards?

Interview question six above elicited most of the responses however, some aspects were also gained from interview question seven, in short which was:

Can you give me a concrete example of something you've done to innovate with TEL but still comply with the TEQSA Threshold standards?

In Chapter eight, the analysis of this outcome space will be discussed along with outcome space seven to show how the work of EDs links with their practice of TEL innovation under TEQSA TS.

There were five CoD in this outcome space:

1. Non-involvement understandings (A)
2. Assistance understandings (B)
3. Bounded understandings (C)
4. Arranged understandings (D)
5. External understandings (E)

The complete outcome space is depicted in figure 6.1 below. Table 6.2 gives a summary of this CoD and a picture of the distribution of EDs understandings (see 4.3 for a discussion of the table's inclusion).

6.2 Outcome space three: How do EDs understand their work under TEQSA TS

6.2.1 Non-involvement understandings (A)

In this structure of awareness, EDs understood their roles as mainly being separate from institutional activities linked to TEQSA TS. In this view, EDs saw others being responsible for ensuring TEQSA TS are met. As such, EDs understood their roles as having minimum or non-nvolvement and hence did not believe that these TS could be said to immediately relate to their TEL innovation work:

> *Because I do not work with the quality assurance myself, I don't know how much I can really contribute to that…And then the reality of it is it's not part of my position, it's not what I do. I work in a larger kind of framework, the threshold standards are communicating good practice anyway…So I personally never even seen something that is really limiting me in any way. [PT07]*

[GA] So, do you work with academics on the development of the units then?

> *In some cases, we can, it's probably not the bulk of our work. It's probably minimal that we do that, because we've got people out on the ground who support them with that. [PT08]*

	REFERENTIAL (The meaning or understanding)				
STRUCTURAL (Internal and external)			**Static**	**Inward (Narrow)**	**Outward (Broad)**
			EDs work is not directly linked to institute TEQSA TS activities	ED work involves TEQSA TS and is guided by internal faculty/college/school policies/strategies	EDs are further guided by external guides, project and program documents
	Unaware	Foreground: There is no aspect of TEL innovation under TEQSA TS in the foreground due to EDs position description and/or knowledge of TEQSA TS.	1. TEQSA TS are dealt with by others, there is **non-involvement** from EDs **(A)**		
	Limited	Foreground: Involvement in improving learning can only be enabled at time of developing/reviewing online sites and only by invitation		2. EDs are **assisting** academics in development of elements of online sites **(B)**	
	Bounded	Foreground: Constructive alignment is fundamental before looking at the use of technology		3. **Bounded** by the need to ensure constructive alignment across units and courses **(C)**	
		Foreground: Predetermined best practice governs the structure and function of TEL		**4. Arranged** internal audits/reviews/projects to improve online units and technology use (D)	
	Connected	Foreground: Improved quality of learning comes from external bodies which filter down to policies/strategies			5. **External** benchmarking of TEL with other institutions to improve institutional use **(E)**

Figure 6.1 Outcome space three: EDs understandings of their work under TEQSA Threshold Standards.

	How is TEL innovation experienced under TEQSA TS			
	Unaware	**Limited**	**Bounded**	**Connected**
	A	**B**	**C, D**	**E**
No. of participants (by highest level)	2	6	10	8
	EDs work is Static under TEQSA TS	**EDs work is Narrowly focused (Inward) under TEQSA TS**		**EDs work is Broadly focused (Outward) under TEQSA TS**
No. of participants	2	16		8

Table 6.2 A summary of the distribution of EDs understandings within Outcome Space Three.

There is nothing in the foreground of this structure of awareness as the EDs do not see themselves working with TEQSA TS, at least not at an immediate level and at the time of interview. They are often *unaware* of how TEQSA TS can be directly worked into their roles. Such work then, would not be something they would expect as part of their roles and would have to occur on an ad hoc basis and when directed by management. Further, TEQSA TS were thought of as being absorbed and represented by institutional policies and strategies, although they are not consciously referring to them in their day to day work:

> *…the University has their own policies in place which are then obviously adhering to TESQA. By the time it gets down to me, I am just adhering to the University's policies, so I do not actually look at any of the TESQA standards. [PT03]*

> *It's a bit of a background issue for me. It's definitely a topic of discussion with a lot of people that I work with, particularly the Associate Dean of [XXXX]. I would say that it doesn't become a part of*

> *my discussions very often at all…But look, apart from those types of discussions, I just find in my daily work, it rarely impacts. I couldn't tell you exactly what each of the colleges do to meet these standards. I hear about them a fair bit, but because it doesn't impact on me. I just let it go by. [PT19]*

As such, this is the base level of the outcome space and the referential meaning subscribed to it is Static as EDs consider that they are doing little under the TEQSA TS.

6.2.2 Assistance understandings (B)

Some EDs indicated that they were involved with work under TEQSA TS but that this was at an elementary level, such as assisting academics with their needs. They did not lead the work but rather were invited by the academic to help with meeting TEQSA TS requirements at the development or implementation stage.

> *Essentially the faculty will manage the quality of the product that they are delivering because that's their standards. The University has its own standards which are set down in the policy which they have to follow. If there is any question about who is delivering it, the faculty ensures that the product is there, the unit is there, the teacher is there, that the standards are met, moderation is set. Where I might come in, is perhaps if there is interest in providing more engagement, suggesting pre-moderation meetings, suggesting teaching teams, collaborating before delivery, providing a structure so that if it's a different sort of delivery. Also, if someone is new to an online space, providing communication tools, regular emails…Its normally the transition from face-to-face to online were we might provide that feedback. But meeting those qualification standards, it will be very largely dealt with by the faculty and we will come in to support high delivery, high-quality- where they would like the support. [PT09]*

In some cases, EDs help academics with TEQSA requirements indirectly via workshops:

> [GA] So, do you have any other input into improving the units?
>
> *Not directly, but through the workshops, so for business and law, the faculty that I am embedded in, every trimester they run workshops for staff to get them going with their unit. We've also conducted workshops on video and audio assessment, and delivery. We show them how much of an impact it makes to the student learning experience. We have tools that they can use that are very user-friendly.* [PT25]

At the foreground of this structure of awareness is that the EDs understand their work with TEQSA TS aspects as being *limited*, so they have a minor role to play in effecting change. Influence may be affected either indirectly via workshops or meetings, or only after all planning of the curriculum is complete and the academics is ready for developing online sites.

Additionally, for some EDs the discipline is also said as being restrictive of what the ED can do:

> *…in the discipline of Law, there's only so much you can do with that unfortunately. It's not like science or medicine where you can develop the human body in 3-D form and get on virtual reality and interact with that. It's not like nursing where you can develop online situations…But it's kind of a straightforward discipline where there are set skills that apply to every unit, so if you learn those skills you going to be a great lawyer. Because of that, what we innovate is much the same in all the units. [PT02]*

The difference between this level's referential aspects and that of the previous is that at this level, TEQSA TS factors are recognised and are more noticeably referred to as part of the EDs work, albeit at an elemental and bounded way. They see themselves as supporting improvements of teaching and learning through unit development although again, TEQSA TS are not the immediate reason for doing so. Instead, reasons such as student engagement or experience tends to drive the change.

Added to this, is the challenge that EDs have when working with reluctant academics. Such challenges impede what the EDs can do, and restrict working with academics that are willing and able:

> [GA] Are academics required to involve you in [improving their units] or is it on a 'if they want to basis'?
>
> > *It depends. So, some staff will not seek our support, even though they have been identified as a project. They may have very poor student outcomes for instance, but they may not seek our support. Even if we contact them, meet with them and offer support, we may not get it. In other cases, staff may be basically directed to turn up to a curriculum development workshop. Sometimes it's a bit like herding cats. We don't have the authority to make people do anything, even the people that we work with, the people who guide our workloads and projects, they can't always get people to do what they'd like them to do. So, we just work in that sort of environment and we work with the willing. It tends to be that the people who probably need the most help, don't get it or don't want it. That's properly fairly common. I would imagine. [PT19]*

The referential aspect for this structure of awareness is hence seen as being inward facing, as EDs work with individual, school/faculty/unit academics, with limited views

on TEQSA TS and what is happening beyond the individual unit or what is happening in disciplines outside of the institution.

6.2.3 Bounded understandings (C)

EDs with this understanding see their involvement with TEQSA TS as working to achieve constructive alignment across units and courses. These EDs have a priority to ensure constructive alignment, and enhancing units using TEL is secondary. There may also be improvements to elements of the course/unit, for example, assessments, because of an initial audit conducted for the constructive alignment purpose:

> *When people are putting together new units, I've been helping them create learning outcomes that are clearly situated within, or underneath, or progressing towards the course learning outcomes for the particular course that they are hoping to put the new unit into. So, there's the learning environment and how well does that meet quality standards particularly in relation to quality matters, that set of standards. But also, I work with people in the development of their learning outcomes at the unit level and in the development of their assessment tasks. So, helping people understand how to write assessment criteria that measure the learning outcomes and also how they sit within the task. I do a lot of work with small teams and individual academics making sure that the assessment and the learning outcomes work, or make sense. [PT13]*

At the forefront of this structure of awareness is that the opportunity for TEL comes after constructive alignment. It is therefore the constructive alignment task which enables TEL to be of particular value:

> *What we always do when we are working on an existing unit or program, is to look at the unit of study outcomes, and then we look at*

the assessment items and we try and make sure it is aligned. And if it's not, we try and push people towards being a bit more realistic in what their assessment items are. Which is I think it is important to have a teaching background …I mean we have a lot of people who work here who don't have a teaching background, but they're very strong in other areas. So, it's always good to have that mixture of both. [PT18]

So, I'll give you an example. I was working with the unit coordinator just last week and she wants to develop her unit in modules. And because her unit is on life employment law, there's always stuff about unions in employment law, so she's going to embed media clips and newspaper articles and relevant snippets in her course…when we were talking I said to her "let's just check over the learning outcomes to see that this all aligns" because I find that unit coordinators can, because they plan their learning outcomes so far in advance, when it comes to actually planning the unit, they might not actually give them a second glance. And so, we actually make sure that what she had planned with her assessment and her learning activity was aligned to those learning outcomes. So that's part of the conversation I have now [PT02]

Also at the foreground of this CoD is that good constructive alignment is necessary before using technology. Again, it is a case of pedagogy before technology. However, this *bounds* what can be done in that the alignment of pre-determined pedagogy and content may constrain opportunities for more innovative ways of teaching and learning:

At the core of me is applying proper design principles…If you take technology away, course design- it's understanding that….at the other level, there's certainly a lot to do with design, and more visual design principles or information design principles, so things like signposting, scaffolding information within a learning management system,

accessibility concerns, universal design concerns, we have a lot of skills there. These are not always at the forefront, so it's almost like quality improvement by stealth. If we help someone with something, we are always looking at those bits at the same time. And rarely do you actually go in with all those in mind. [PT22]

The referential aspect is different from the previous because it is based on developing more than one aspect of the unit/course and to ensure cohesiveness of the whole, mainly in terms of constructive alignment. Thus, improvements are not siloed but rather may relate to one another, adding value to the entire learning experience. The similarities though are that the work done is still inward looking, with EDs working with academics/schools/faculties/units on their needs, without sight on external happenings with TEL and TEQSA TS.

6.2.4 Arranged understandings (D)

EDs in this structure of awareness space saw the undertaking of arranged internal audits/reviews/projects as being the avenue to improve online units/courses and technology use. Such avenues provided more structured and institutional support than that of 'going it alone'. Particularly, the need to apply tried and tested TEL strategies to improve units/courses was emphasised.

> [GA] How do you ensure that your courses and units meet the course accreditation standards? How do you make sure they do comply with these kinds of things?
>
> *Well, we'll do an audit. We're about to do that with the units. We call it a health check, so we don't scare off the academic staff. They hate the feeling that are being watched or critiqued or whatever!…So we go in and we'll actually be auditing most of our units. What we do to support quality and standards, two years ago [we] developed a set of five*

principles that we needed for [online units], and had developed best practice in how to set up a unit and what you need to be doing in that unit to meet the criteria- the quality and standards for learning and teaching. [PT04]

The only way that that is really happening is that we actually sit with them and go, well, this is how we would like to have it. So, that's all been supported by research as well- like what is suggested in research, about how to set up a unit for best practice for online learning. So, we follow-up that. [PT04]

The structural aspect here is that research into 'best practice' guides what is considered both good education practice and TEL strategies.

[GA] One of the interesting things you mentioned earlier on, again, is this trying to wait until certain technologies have matured, have moved forward before you would consider them. Why is that?

Just to make sure there is buy in. You don't want to focus too much on the technology that is not going to necessarily be available…I can see a world of pain the academics are going to get into if something goes wrong. [PT26]

[GA] That's really important for you, because you don't want to get the academics upset?

If I'm going to make students guinea pigs, it's got to be a compelling reason. They are going to have better outcomes or something. That's like a systemic push that I'm not necessarily into. I'm not convinced that it gives a hell of a lot of added advantage to what we're currently doing. I mean, and I'm willing to be convinced, but I can't see it for the current situation. I think, if it's a case that we have the technology, let's try and shoehorn it into places it doesn't really need to be because it

> *kind of does what something else that we don't have does, I am just not going to recommend that. But you know, if it's integrated, and I see a compelling use case for it, I'm definitely willing to take that on. I'm not anti-moving ahead. It's not a playground here. We're here to educate students as well. Anything that's going to provide cognitive load that is not being applied towards what they're interested in studying, it's got to be thought of really, or it's just a general pain in the ass-ness. That's why that student and teacher experience has always got to come first for me. We will think about things, but it's got to prove itself to me. [PT26]*

In the above case, the innovation is again not considered worth the risk of disrupting teaching and learning.

The difference in the structure of awareness to the previous CoD is that in this space, EDs work in more institutionally structured and managed ways, auditing units/courses to improve quality but based on research or evidence based good practice. Their thoughts of innovating are thus *bounded* by these understandings.

> *…let's take the international [project]….there is a program that international people come to us and say 'there's a whole group of courses that we have to put up for [this country] in September 2016. Here they are, can you work with the course coordinators to get these group of courses up to scratch for that international delivery?' So that becomes a project. But there are whole courses that are happening face-to-face here in [this city] that we never get to see, unless there is some other catalyst that is going to be there to bring them to our attention. [PT21].*

The referential aspect is similar to the previous CoD because it is inward facing in that best practice is based on internal policies and strategies or through individual research into good practice.

> *…working on this project, we tend to get more people coming along to things. It's a much more focused way of working. Rather than offering up workshops to anyone in the University to come along to and then getting poor attendance. We have a specific project, we define some specific outcomes. We have a contact person that is in charge of the teaching group and we can generally get pretty good results that way. [PT19]*

6.2.5 External understandings (E)

In this last CoD, EDs understood TEL as needing to be benchmarked with external institutions or governing bodies to improve TEL practice. TEQSA TS become reachable with the practice of benchmarking and undertaking improvements in online learning as a result. Some of these benchmarks are based on the Quality Matters program (originally from the USA). Other national programs such as ACODE provide benchmarking opportunities. In a few cases, there was direct mention of TEQSA itself as the catalyst for improvements to teaching and learning.

> [GA] What is prompting the change?
>
> *It's a mixture of a lot of things, I think part of it is external with the AQF, and the focus on learning outcomes, with TEQSA's focus on learning outcomes. And having to actually report against how students have met learning outcomes, as opposed to a percentage mark. I think that, because it's external, typically that's a bit of a driver, when people have to meet the accreditation standards and so on and so forth, and auditing and that kind of thing. Also, we have tried a few different projects, implementing quality matters, in terms of the design of the*

online space. So, that filtered through and a number of people have taken that on-board. [PT13]

[We have the LMS] 0-5 Framework that I mentioned earlier. So, level 0 is that they have an online presence. They have a unit outline, they have, a discussion forum, generic discussion forum and they might have some content. Leading on from that, level 1, they might have more interactive content, maybe some videos, some audio files things like that. Level III would be online submission of assessment items, electronic feedback, whether audio or visual. Level IV would be, are you familiar with the quality matters framework of the US? So level four would have an internal, QM assessment. A peer review and some form of peer assessment. And then level V would have an external QM review. [PT14]

What is in the foreground of this CoD is that quality of learning is improved by benchmarking with external bodies, and that such recommendations can be filtered down to inform university policies and strategies. The EDs help the university become TEQSA compliant by following their institutional policies and strategies as a result. The EDs are aware of such an information flow and some are instrumental in it being embedded in day to day practices, they are *connected* to outside knowledge and skills.

The program is called quality matters. The core of that program, there's online standards intended to improve the student experience in online and blended learning. Now it's an American program and we have just imported it whole…We can't improve on the process, so we're not interested in mucking about with those standards. We use them straight.

I am a concessional rep on ACODE. I pick things up from there from time to time that I bring back and that are useful. One of those things

> *that has been useful for example, is Amazon web services…In terms of pedagogical and general innovation within the technology enhanced learning and teaching space, our TEL governance group has been revamped. It's now a formal subcommittee of the University learning and teaching committee, so we will have a documented line of reporting around TEL and innovation will be one of those lines of reporting. So, we should get better access to senior ears through that route. [PT15]*

The referential aspect here is different to all others in that external bodies are seen as influential to teaching and learning generally, and specifically with TEL. This provides an outward view on what is happening both locally, nationally and in some cases globally with quality of teaching and learning and with TEL. There is also acknowledgment that TEQSA TS play an important role for course design in the future:

> *…not all those projects come from quality assurance type perspectives, but a lot of them do. For example, if you're getting terrible student feedback, if the grades are awful, obviously there needs to be a redesign of that particular course or subject…one of the courses I'm working with is the Bachelor of [XXXX]…and they are in a massive course redesign…Whatever we do is going to be very closely linked to what the accreditors expect for that profession…I think our core work is very closely related to what these courses are envisioning for the future and for the accreditation bodies. [PT27]*

6.3 An overview of the hierarchical structure of the third outcome space

In this third outcome space, five CoDs were identified and described. The first CoD was seen as being *static* as EDs did not believe or were unaware that their work was influenced or guided by the TEQSA TS. They thought of themselves as being

separate to these requirements and as such, TEL was not affected. Hence, their work was labelled as being *static* or unchanging in relation to TEQSA TS and TEL. In the further three levels, CoDs had a similar structure of awareness, that of being *internall*y focussed, with the emphasis of work being directed and informed from inside the institution. In the second CoD, EDs viewed themselves and their work as that of *assisting* academics with their needs, on an ad hoc basis. The EDs did not feel that they directly contributed to TEQSA's TS but rather their focus was on improving aspects of online units were requested and that this limited what they could do. This mostly occurred when units were being developed or reviewed. The third level, that of being *bounded*, was identified by those EDs who helped with ensuring constructive alignment within a unit, as per request of the academic. Constructive alignment was considered important before TEL was considered. Level four was labelled as being *arranged* because EDs in this CoD undertook audits/reviews of projects related to improving quality of teaching and learning in online units/courses and their work was to specifically do so. Moreover, within in this level TEL work needed to be based on good practice or be evidence based, and hence such understandings may bound innovation within certain pre-determined ways. Often, this resulted in projects that had specific outcomes attached. The last level, that labelled *outward,* EDs had a different referential aspect to all others. It was named as being *outward* as EDs looked outside of their institutions, and were connected to external institutions or governing bodies to inform their teaching and learning and TEL work. These qualities then filtered down though institutional policies and strategies to become part of their day to day work. In some cases, TEQSA was specifically mentioned as being the driver of change in this regard.

In summary, EDs understandings went from being not involved with TEQSA TS work (level one), to EDs working on an ad hoc basis, and working with TEQSA TS sporadically (level two), to EDs assisting academics when requested to help with

TEQSA TS needs (level three), to arranged ways of work on TEQSA TS needs and was directed (level four), to lastly, being informed by outside bodies as regards their work with improving teaching and learning with TEL.

6.4 Conclusion

This chapter has presented findings from outcome space three, or how EDs conceive of their work with TEQSA TS. In this outcome space, there were five different categories of description, namely Non-involvement understandings, Assistance understandings, Bounded understandings, Arranged understandings and, External understandings. These were discussed as according to five structural aspects: Unaware, Limited, Bounded and Connected aspects.

The referential aspects in this outcome space helped show the variances between the CoDs and grouped them according to those variances. They were labelled as being Static, Inward (Narrow) or, Outward (Broad).

Chapter seven, will present the findings of outcome space four: how do EDs experience TEL innovation work under TEQSA's TS.

Chapter 7 Outcome Space Four: Educational Designers Experience of TEL Innovation under TEQSA TS

It is impossible to live without failing at something, unless you live so cautiously that you might as well not have lived at all—in which case, you fail by default.

J.K. Rowling to Harvard in 2008

7.1 Introduction

How EDs experience TEL innovation under TEQSA TS is discussed in this Chapter. It is the last of the research outcome spaces and sums up how EDs experience (practically) TEL innovation under TEQSA TS. It will be further compared with how EDs theorise their roles and TEQSA TS in Chapter eight.

This outcome space was analysed from data gathered mainly from interview question seven: Can you give me a concrete example of something you've done to innovate with TEL but still comply with TEQSA TS? or

Why has innovation not happened? And/or

Or How did you go about that? And/or

Why did you do it that way? Or/and

What did you learn from the above process?

The referential aspects are found in Table 7.1 below, and are labelled as:

1. Status quo
2. Piecemeal
3. Pre-planned
4. Propagated

These understandings will be discussed individually in terms of their structural and referential aspects, with added quotes illustrating the understandings.

Table 7.2 gives a summary and a picture of the distribution of understandings of EDs across the structure of awareness (See 4.3 for a discussion of the table's inclusion).

			REFERENTIAL (The meaning or understanding)			
			Maintained	**Constrained**	**Supported**	**Encouraged**
			There is very little to no involvement with TEQSA TS	TEL innovation occurs but is constrained under TEQSA TS	TEL innovation is supported under TEQSA TS	TEL innovation is actively encouraged under TEQSA TS
STRUCTURAL (internal and external)	**Enduring**	Foreground: EDs not involved with any new TEL innovation	1. There is a maintaining of the **status quo**			
		Foreground: Varying factors influence TEL innovation, so it occurs where and when possible		2. Some TEL innovations but on a **piecemeal** basis		
	Considered	Foreground: TEL innovation possible when organised via recognised strategies or projects			3. Evidence based **pre-planned** projects enable TEL innovation	
	Speculating	Foreground: Flexible arrangements and risk taking are necessary for TEL innovation				4. TEL innovation is **propagated** by seeding and providing opportunities

Table 7.1 Outcome space four: EDs understandings of TEL innovation under TEQSA TS.

	How is TEL innovation experienced under TEQSA TS			
	Enduring		Considered	Speculating
	1	2	3	4
No. of participants (by highest level)	3	12	9	2
	TEL innovation is Maintained under TEQSA TS	**TEL innovation is Constrained under TEQSA TS**	**TEL innovation is Supported Under TEQSA TS**	**TEL innovation is Encouraged Under TEQSA TS**
No. of participants	3	12	9	2

Table 7.2 A summary of the distribution of EDs understandings within Outcome Space Four.

7.2 Outcome space four: How do EDs experience working under TEQSA TS

7.2.1 Level one: Status Quo understandings

EDs within this level reported no TEL innovation was happening under TEQSA TS. This was mainly attributed to themselves and their work as not being involved in any way with the standards or that there simply were no new innovations occurring at that point in time. The label given to this level is hence status quo understandings

> *So, for me it will be very much envisaged, because we've not done anything yet [PT10]*

> *Some people would, in of itself, see technology enhanced learning as an innovation. We don't at [this university]. Or learning and teaching leaders don't. It's part of the landscape, it's our bread-and-butter. The blended learning model applies to every unit, every unit must have a more or less sophisticated presence in the learning management system and level II in that blended learning model, it requires recording*

of all lectures, it requires use of electronic communication. It requires submitting assignments online, giving feedback online, et cetera. We don't view any of these things as innovations. They are just normal in the modern working environment. [PT15]

We need to get lecturers feeling okay about using technology to help find solutions for them and for them to feel as if those are advantages not disadvantages. There is still a big feeling that technology adds in a cognitive load that is more than they want to deal with and they would rather not…So, innovation, pushing boundaries innovation isn't happening so much [PT23]

The structural aspect of this outcome space was hence that of *enduring* non-innovative periods of time.

I think that in our faculty, it's quite unique, [academics] will only come to you when they have really stuffed it up and that could be at the beginning of semester, at the midway, or at the end when exams are happening, and grades are about to be released and it's a total mess. [PT06]

In terms of referential aspects, the meaning associated with TEL innovation under TEQSA TS is that of *maintaining* the status quo. There is little happening, and it is envisaged that there is little prospect of any significant innovation.

[GA] You said none of these things are particularly innovative?

There's not much, I mean I follow all of the Horizon reports and what have you. There's very little in those Horizon reports that I can see that will become institution wide or multidisciplinary really…the internet of things, I can't see it impacting learning and teaching within 10 years. Virtual reality, I can't see academics redeveloping their course content and teaching approaches in a large range of disciplines to utilise virtual

> *reality. I see these as isolated pockets of innovation. I'm much more interested in generalisable innovations… [S]ometimes I think educational developers don't get the disciplinary respect that they deserve… I get frustrated at people not respecting the academic development [field]…when they suggest a particular approach to pedagogy that is based on evidence. [PT15]*

7.2.2. Level two: Piece Meal Understandings

In this CoD, EDs saw TEL innovation under TEQSA TS as occurring on a piecemeal basis, when and where possible. This was seen as a result of a number of factors including working with reluctant academics, or with those that were available and willing only at certain times.

> *We're not changing anything. We're not making any decisions. The academic is making the decision to either use the tool not use the tool. So, even in terms of the student experience, there is only so much we can do. This is not even talking about my boss, this is talking about my client, which is the academic. [PT11]*

For some EDs who rely on academics to take up on innovative ideas, they cannot innovate because of internal politics:

> *You can only really do what you can do…you don't want to step on the toes of your colleagues in the faculty, because they may want to push something else, or they have their own agenda…we have to be really careful of what we advise and to who. Some faculties want 'this', but don't want 'that' and 'don't even mention it to our staff…it will mean a lot more workload, it's going to mean this, that and the other. You're not going to do it for us'. It's quite political. Which impedes on innovation [PT25]*

> *You think, 'oh we could do an e-book' but they are not allowed to take the e-books into exams...So there is a lot of old-style approaches that just can't change, and I try and work within those educational approaches and I try and work within those parameters to bring change. But there's only so far we can ever get at this stage with technology as it is. [PT02]*

Some EDs were particularly aware of the risks associated with using technology for learning and when up against institutional policies, for instance:

> *But there are also issues pertaining to social media. I've read a number of case studies about how useful social media can be. There is actually a paper that a couple of colleagues and I submitted to the [xxxx] conference…It was around the use of social media and it in Higher Ed and the role of the University policy. Basically, there is a disconnect there that makes it really difficult…If you want to push something new forward, but then you've got all these policies that are sometimes black-and-white not using social media, and sometimes very grey. So, what you do? Do you take the risk at the price of maybe your job? [PT25]*

The risk in this case was considered too much, and this deterred the ED from using certain technologies for learning purposes.

Another factor is the limitations that some EDs have within their roles:

> *We've got no control of course over the assessment tasks that are set. And some of those assessment tasks are like, write a 500 word essay, and assessment no. 2 might be write a 500 word essay as well. I'd like to say, 'could the students do a video presentation of something' or whatever. I can make that suggestion, but I wouldn't be looked at favourably I don't think. [PT21]*

> *We can only do what we're allowed to. If an academic won't enter into a conversation about changing a method of assessment, then there's nothing we can do to change that. [PT11]*

In the above example, the ED is unable to influence the quality of set assessments as they are not involved at the stage they are developed. Below, the ED's role is seen by academics as being that of technical support, with EDs taking opportunities to influence quality taken when they are approached for technical help:

> *The main reason that someone would come to me for support is because they have a technical issue and if I can use that conversation to steer people towards better teaching practice then I'll will do everything I can to do that. [PT11]*

Hence EDs are said to be again *enduring* their current contexts and innovating where and when possible. In terms of the referential aspects, this level is different than the previous as there are innovations under TEQSA TS happening, albeit it in a constrained sense.

7.2.3 Level three: Pre-Planned Understandings

This CoD describes how EDs viewed TEL innovation under TEQSA TS as being possible because of pre-planned strategies, projects or activities. Further, because these strategies/projects are institutionally recognised and often funded, the strategies/projects ensure that activities are based on evidence that the TEL innovation works:

> *Now there's a new structure, I'll be on some projects that have been sponsored, so these are, it's not your typical person, it's someone who put their hand up, got the money, got support and they are getting my time or my colleague's time as additional support. [PT07]*

We have an approach called, [XXXX]. It's a vision for how we want our teaching and learning to transform by the year 2020. As that's our particular brief in this particular unit…Basically, it relies on an academic unit contacting us, saying we want help with blah and if it fits into the [XXXX] vision, then we will be briefed to work with them…in very strategic areas. [PT23]

[GA] Those strategic areas you mentioned before, were they developed at a management level?

Yes. [PT23]

Now I'm also involved in some other research. I like evidence-based or evidence led practice, like one of the projects I'm doing at the moment is to look at the use of the e portfolios- what's actually happening as opposed to what was intended to happen. And that's a multi-institutional project that we're kicking off. [PT12]

…good evidence-based practice into academic practice across the University more widely comes about through the formulation of policy. Policy that is evidence-based and is well intentioned. It's not intentioned as an audit or control or compliance approach. But we know students want a more sophisticated, and yet more consistent online presence for all their units. [PT15]

The structural aspects of this CoD are that of TEL innovation being possible under TEQSA TS when EDs have a specific project or strategy that gives them both the avenue and authority to do so. What activity gets to be made into a project is *considered* by others in this regard and as determined by policies and/or strategies. The difference with this level of understanding and the previous is the degree of support and weight that comes with being part of a strategy or project.

I think it should be an important part of the mix of the way we work, because it does tend to get the right people involved and get people with a bit of authority to demand attendance and results. [PT19]

EDs discussed how the formation of projects or the influence of strategies enabled TEL innovations especially as resources were more easily available.

…and we had internal funding to be able to employ, or pay for a programmer, graphic designer, et cetera to come in and work with us on that…We've got funding to do that again, some time for somebody new to work on it as well. And then there was discussion about it being like a service level agreement and then we can have X amount of changes, small changes done. But anything bigger would have to be costed out. [PT16]

The referential aspect was built on understandings that the support offered by being part of strategies or projects was the key to TEL innovation under TEQSA TS.

The only real comment we got was from a staff member who said, 'is this part of our work allocation to complete these modules?' And we didn't have to answer that, thank goodness. The program Director did. She said, 'well, you are required to be doing this in your practice. This is something that will help you do it better, because you are supposed to be doing these things when you create courses and create resources.' [PT23]

But since then, moving [this university] into the global environment, part of attracting…overseas students in particular, we need to have accessibility to the resources and the teachings that we do. It was decided on high that every unit would have an online presence. In an effort to put the University in a marketable place, where you could actually come and study at the University, from anywhere…So it's a

> *whole new way of thinking about how we do things. The actual unit itself, they still go to a physical hall, and they physically practice together. So, it's changing the mindset of the academics, what an online presence actually means. It's not all single directional learning. [PT14]*

This aspect is different to the previous because of a more directed and strategic support is given with the result that resources are made available and the expectation is that the innovation achieves its outcomes. As such there is less willingness for innovations to be risky, and more need of it being based on evidence.

7.2.4 Level four: Propagated Understandings

In this last CoD, EDs talked of TEL innovation under TEQSA TS as being one of talking risk, looking for new ways of teaching and learning with technology and in building on these ideas to make them a reality. There were fewer numbers of EDs that showed these understandings than that of the previous level. EDs spoke of sowing seeds of innovation and allowing innovations to take hold.

> *It's serendipity as well. I'll go and give a talk about something, and somebody will pop up at the end and things often come up that way. I like to use the metaphor of planting seeds. You just plant seeds all over the place and water them all and tend to them and some grow and some don't. [PT22]*

Forefront in the EDs mind was the need to take risk, and hence *speculating* on innovations:

> *So, once you've set up an environment which encourages innovation, which I think is the first thing to do, an innovation involves risk and risk involves failure, so you have to be prepared to have things not work. I think once you start to establish that culture, then I suppose*

> *encouraging people to look outside the organisation, so go out to the world stage and read the Horizon reports and all these other things. [PT12]*

> *Wherever universities can, they should be encouraging this idea of discovery discretionary, certainly enough time for people like us to [play about] without the worry of rescaling. We are very risk averse right now. Whether that's the political climate or the funding climate where risk adverse in the long run is the death of innovation. You just end up with doing the known and the boring. [PT22]*

The structural aspect in this level was that of having flexibility and time to innovate. This is different to the previous level because there is a concerted effort to innovate, and to do so firstly on an individual level. There is also a willingness to take risks for the sake of innovating.

In regard to referential aspects, this level is labelled as encouraging as it is based on an understanding that innovation comes from being encouraged to innovate:

> *I've had a lot of freedom at [this university] to play, and just be given a lead on something and to just see where it goes. [PT12]*

> *I'm very grateful to be working for someone like [Dave] who loves to see innovation. I think there is one thing that if it would ever change it, is if you ended up was somebody who was risk adverse. [PT12]*

This is different from the previous level as the ED is seen as self-supporting and not requiring at first, the need of guiding strategies or projects. There is a recognition that innovations need to be worked through before they are implemented with students or staff. The evidence however comes from their own research and trialling. They also recognise their role is to look for TEL innovations:

> *Now in my role, I can actually change the tools people have and using my educational qualifications and teaching experience, I can more readily evaluate the technology from the point of view of the practice. [PT12]*

> *With enough perseverance, you innovate. And this is the core of this discussion, is that innovation, it requires passion, it requires dedication, it requires wanting to push the boundaries for anyone at any level in any job. That's where innovation comes from. And that's not everyone's personality…how shall I put it, what we see in Ed designers or Ed developers or instructional designers…We see the ones that just want to push forward on the innovation, we see some just want to sit in and do the support tickets because that's where they are comfortable and it's the known and they don't want to extend. You see some in the middle, but that's people. [PT22]*

Hence, this is the highest level of understanding of innovating with TEL under TEQSA TS.

7.3 Overview of the hierarchy of categories of description in the fourth outcome space

Four CoDs formed the hierarchy in this fourth outcome space. In the first *status quo* level, EDs do not consider they are innovating under TEQSA TS. This is due to a conception that the activities they carry out are no longer innovative, or that their roles precluded working on improving teaching and learning quality. They are enduring this status quo in the meantime.

In the second *piece meal* level, EDs did see innovations happening, but these were on an opportunistic ad hoc basis. The reasons for such were because they relied on the academics to allow them to work on their units/courses and, because of varying

preventative factors e.g. internal politics, reluctant academics and the limitations EDs saw of their role with teaching and learning quality as a whole. Again, they are enduring the current context but are also innovating where and when possible.

The third *pre-planned* level, EDs understood TEL innovation under TEQSA TS as being possible through strategies or projects. These gave direction, resources and authority to get the work done. However, most saw the taking up of these innovations as being due to evidence, that is, the decisions were evidence based and considered by those who make decisions. In doing so, the evidence would help in mitigating risks.

The fourth and final *encouraging* level included understandings that innovation was born through taking risks, and that it at first did not necessitate the need of a formalised strategy or project. As such, individuals could innovate. Further, that there was a need for EDs to work with some flexibility and be committed to innovating under TEQSA TS. Accordingly, individuals could speculate on innovations and drive them forward when needed. Additionally, EDs recognised that innovations can arise through the 'planting, growing and propagating' of seeds. In this way, EDs are actively encouraging innovation.

In summary, the hierarchy goes from EDs not innovating with TEL under TEQSA TS (level one), to innovating on an ad hoc basis (level two), to EDs innovating through directed strategies or projects (level three) and lastly, EDs driving innovation and in encouraging innovation under TEQSA TS.

In the next Chapter, I will discuss the analysis of EDs innovating with TEL both generally and under TEQSA TS. This will give a picture of TEQSA's influence on EDs and TEL innovation.

7.4 Conclusion

This chapter has presented findings from outcome space four, or how EDs experienced TEL innovation under TEQSA TS. In this outcome space, there were four different categories of description, namely Status quo, Piecemeal, Pre-planned and, Propagated experiences. These were discussed as according to three structural aspects: Enduring, Considered or, Speculating aspects.

The referential aspects in this outcome space helped show the variances between the CoDs and grouped them according to those variances. They were labelled as being Maintained, Constrained, Supported, or Encouraged.

The next chapter will provide further analysis of experiencing TEL innovation under TEQSA TS and outline the importance of TEQSA TS to TEL innovation.

Chapter 8 EDs Understandings and Experiences: Interrelations and Connectedness

Part of the problem is when we bring in a new technology we expect it to be perfect in a way that we don't expect the world that we're familiar with to be perfect.

Esther Dyson

8.1 Introduction

The previous four chapters outlined the following conceptions:

- How do EDs understand TEL innovation?
- How do EDs experience TEL innovation?
- How do EDs understand their TEL work under TEQSA TS?
- How do EDs experience their TEL work under TEQSA TS?

In this Chapter, further analysis of experiencing TEL innovation under TEQSA TS is discussed, specifically in relation to those EDs that believe that they contribute to quality of teaching and learning, and in respect to conceptions of TEL innovation and experiences of innovating with TEL generally. This analysis will further illustrate whether TEQSA TS are an important factor when innovating with TEL or if there are other factors that may need further consideration. This Chapter therefore presents responses to the first three research questions I posed in Chapter one, namely:

1. How do Educational Designers understand TEL innovation?
2. How do Educational Designers experience TEL innovation?
3. How do EDs understand their TEL work under TEQSA Threshold Standards?

Following, Chapter nine discusses these experiences as related to literature, referring to that outlined in Chapter two, and in response to research question four:

What information and ideas gained from this study can inform Educational Designers and the TEL innovative work they do?

8.2 Innovating with TEL: Understandings and enacted experiences

Firstly, the EDs understanding of what TEL innovation 'is' was viewed against how it was experienced. To do so I looked for what EDs were understanding as TEL innovation, and referenced that to that which was experienced. Basically, I cross-referenced Tables 4.2 with Table 5.2, which showed where participants understandings of TEL innovation lay, and as compared to the enacted experiences of the same participants. The following table illustrates the outcome:

(Please also see 4.3 for discussion regarding the inclusion of participant numbers within each category)

			Enacted Experience		
			Sustaining	**Constraining**	**Influencing**
Stage of understanding	**First stage**	**Maintaining**	1	8	0
	Second stage	**Enhancing**	0	14	1
		Transforming	0	1	1

Table 8.1 EDs conceived and enacted experience of TEL innovation.

The enacted experience is taken from Table 4.1, that is, the referential labels which describe the 'what' of enacted TEL innovation. The stage of understanding describes

the level of understanding taken from the referential labels of Table 5.1, or the level of understanding of what TEL innovation 'is'. For purposes of further analysis, they are further categorised into two categories: Stage one and Stage two, as described by Salmon (2005, also see 2.2.3).

With Sustaining experiences and Maintaining understandings, the purpose of TEL innovation was not for improving the quality of teaching and learning per say. This perception is underpinned by a first stage of understanding, that is, they understood TEL innovation as a new way of doing something familiar but without a change in pedagogy. As such, s/he believed that they were not pursuing TEL innovation, and rather at that point in time, s/he experienced a sense of status quo with her/his work.

EDs that innovated under Constrained circumstances and had a first stage understanding of TEL innovation managed to innovate with TEL but these were limited to doing things in new ways. Further, the ED's were subjected to a number of limiting factors, for example, being reliant on academics to involve them with their units (opportunistic ways of innovating), or being strongly guided by institutional policies or strategies which in turn meant pre-determined projects directed what work they did (directed ways of innovating).

ED's that were at Salmon's stage two of understanding saw TEL as being used in new ways "to advance beyond what was possible in the classroom or to combine traditional approaches with [educational technology] in effective and worthwhile modes to meet new objectives and purposes of teaching and learning" (Salmon, 2005, p. 202). Those with an understanding that were considered Enhancing, understood TEL innovation as that of enhancing teaching and learning with TEL but did so under constrained circumstances (similar to constraints mentioned previously). Another, although also understanding it as Enhancing teaching and learning, was

additionally seen to be influential with their efforts, that is, s/he drove TEL enhancements and could form institutionally recognised projects out of their work.

The highest level of understanding was that of TEL innovation as being more than just enhancing certain aspects of teaching and learning and instead involving transformation (extending the second stage of understanding). By transformation it is meant that the nature and form of teaching and learning practices are being 'shaken up' and there are changes at a fundamental level (Selwyn, 2016). However, there were some Constraining experiences, that is, being constrained in his/her ability to transform teaching and learning. For example, her/his work was directed by others and hence s/he focussed on that work, rather than transforming the teaching and learning experience. The highest hierarchical level of experiencing was that of being Influential, and there was more flexibility in the ED's role, enabling them to drive innovation.

The above findings show the range of EDs enacted experiences and stages of understanding. Again, showing the numbers of EDs in each category was not to emphasis where majority and minority of understandings and experiences lie, but rather they represent a picture of the understandings and experiences across the ED sector.

8.3 Innovating with TEL: Understandings of role and enacting under TEQSA TS

Here, the EDs view of their roles as related to TEQSA TS is described as linked to what was experienced or enacted. This data is illustrated in Table 8.2 below:

		Enacted Experience			
		Maintained	**Constrained**	**Supported**	**Encouraged**
Level of understanding	**Static**	0	0	2	0
	Narrow	2	8	5	1
	Broad	1	3	3	1

Table 8.2 ED's level of understanding of role under TEQSA TS and their enactment of TEL innovation.

The level of understanding is described as according to the ED's referential meaning of understandings of their roles under TEQSA TS, whilst the enacted experience is in relation to the referential aspects of the experience of EDs under TEQSA TS. As can be seen in Table 8.2, there were EDs that understood that they were not innovating with TEL under TEQSA TS (having a Static understanding). There were also EDs that had a Narrow view of innovating and those that had a Broader view of innovating under TEQSA TS.

Of those EDs that saw themselves as not being involved with work concerning TEQSA TS (that is, Static understandings), they however indicated that they were supported to do TEL innovation in general. Like that in Table 8.1, support was provided through formally arranged projects or strategies. As these EDs do not consider their work as having influence on improving teaching and learning quality, it is difficult to incorporate their experiences into the overall research question of that of TEL innovation being affected by TEQSA TS.

EDs that had a Narrow or inward facing view of their work with TEQSA TS all had a range of enacted experiences. These understandings, all falling under a Narrow (or inward facing) view of their work with TEQSA TS, may limit EDs perceptions of the

different ways that innovation can be enacted. Some EDs (having Maintained understandings) indeed perceived themselves as not doing anything new regarding TEL innovation. Others under this Narrow category innovated under either Constrained or Supported circumstances, whilst there was also possibility of being actively Encouraged to innovate. There was also a possibility that those EDs that saw TEL innovation as requiring Transformation, also could have a narrow understanding of their role under TEQSA TS but were Supported via strategies or projects. This suggests that TEL innovation under TEQSA is possible but would be guided mainly by internal policies/strategies. Overall, the EDs at this level may be viewed as perhaps being influenced mainly by internal policies and strategies that may or may not have a bigger picture of conditions that support TEL innovation. For those with Constrained ability to innovate, reasons given were much the same as for innovating with TEL generally. Those that were Supported, were through pre-organised strategies and projects and those that Encouraged innovation, actively sort to do so under TEQSA TS, albeit with an overall narrow view of what may be possible.

Those EDs that had a Broad view may also have had varying understandings of enacting TEL under TEQSA TS, again arranged in a hierarchical order. EDs with a broad understanding included those that were not innovating with TEL (Maintained understandings, the lowest in the hierarchy), those that were Constrained in their innovations, those that were Supported via strategies or projects and those that were actively propagating innovation (Encouraging understandings and the highest level of experience in the hierarchy).

In the case of EDs with broad views, it may be said that they may have a greater understanding of how their roles relate to good teaching and learning, however that does not necessarily mean that they have a better prospect of innovating. Hence,

most of these EDs manage to innovate but with different level of success, and not solely because of the TEQSA TS.

8.4 Key observations of EDs TEL innovation both generally and under TEQSA TS

When examining experiences with TEL innovation both generally, and then specifically under TEQSA TS, the following key observations are made:

- Understandings were spread in a comparatively uniform manner across all EDs in participating universities, that is, in most cases there were a variety of EDs within the understandings and enacted experience tables. This made for clustering around the middle points of the tables. Major variances in understandings and experiences came with the outermost points of the tables, such as, for Table 8.1 Maintaining understandings and Sustaining experiences when compared to that of Transforming understandings and Influencing experiences. And with table 8.2, Narrow understandings and Maintained experiences compared to Broad understandings and Encouraged experiences. These understandings and experiences depict the variances in outcome spaces both for enacted experience of TEL generally, and secondly for enacting TEL under TEQSA TS.

- In Table 8.1, Stage two levels (Enhancement understanding) suggest that EDs are attempting to innovate with TEL to improve learning, although many are being constrained.

- Again, in Table 8.1, Maintaining understandings suggest that EDs have simplistic views of innovation and generally view TEL innovation as involving new technologies or practices without changing the underlying pedagogy.

- There are EDs that consider TEL innovation as involving the transformation of pedagogy, although they seem to lie on an outer edge of the outcome space.

- EDs experienced their TEL innovation work both generally and under TEQSA TS as being constrained due to a number of central understandings. Factors revolved around; the academics willingness and ability to work with the ED; the culture and politics of the university, all seen as bounding innovations and, whilst the EDs further perceived their roles of improving teaching and learning as being restricted.

- Whilst directed strategies and projects were viewed as providing avenues for innovating generally, they were also viewed as being restrictive. This is in the sense that EDs have little flexibility or autonomy to innovate outside of the strategy/project remit, and the need to adhere to institutional policies/strategies.

- When looking at TEL innovation under TEQSA TS, again strategies/projects were viewed as providing avenues for EDs to innovate, although in this case because of the compliance nature of the TEQSA TS, strategies and projects were viewed positively (Supportive understandings) as it gave EDs authority to undertake TEL innovation. Hence, at least on behalf of the EDs, TEQSA TS were not of a great deterrent to innovate with TEL.

- Those EDs that fell under a narrow understanding of their roles and TEQSA TS may have limited understandings of TEL innovations outside of their institutions.

- However, those with a broad understanding had similar variety of enacted experiences to that of narrow understandings, that is, that of Maintained, Constrained, Supported and Encouraged experiences. This suggests that

understandings that involve broader ideas outside of the institute, do not necessarily improve an EDs ability to innovate.

- Those EDs that were encouraged to innovate with TEL under TEQSA TS may have either Narrow or Broad views of their role under TEQSA TS. An ED with a Broad view saw TEL innovation as transforming pedagogy and s/he actively encouraged and influenced TEL innovation in his/her place of work, both generally and under TEQSA TS.

- An ED with a narrow view of his/her role can still be encouraged to innovate. This may suggest that TEL innovation is possible even with a narrow or inward view of innovating under TEQSA TS, but that the innovations would possibly be guided more so by internal policies and strategies.

- Those EDs with broad views of innovating with TEL under TEQSA TS but were Constrained or Maintained, may possibly suggest that internal pressures were most likely to maintain or constrain innovation.

- There was emphasis throughout the interviews on concepts such as; pedagogy before technology; evidence-based practice and; best practice as being important for making decisions about TEL innovation.

8.5 Conclusion

The above observations contribute to research questions one to three, and the findings are depicted by two different maps. The first shows the variations in ED understandings and as cross-referenced to their experiences. It therefore illustrated EDs understandings and were considered as Maintaining, Enhancing, or Transforming TEL innovation as related to their experiences of being Sustained, Constrained or, Influential. The second mapped the EDs understandings of EDs work under TEQSA TS as that being Static, Narrow or, Broad. These were related to their

experiences of working under TEQSA TS and showed experiences that were Maintained, Constrained, Supported or, Encouraged. One of the main conclusions drawn from this cross-referencing is that TEQSA TS are not a main influencer to TEL innovative work, and that rather, EDs are supported to innovate. However, TEL innovation is being constrained by a number of other aspects and which serve to maintain pedagogical models of teaching and learning.

In the next chapter, I discuss the illustrated findings further and draw on literature to critique assumptions made by EDs, and to further relate EDs TEL innovative work to micro and macro contexts.

Chapter 9 Technology Enhanced Learning Innovation at Australian Universities: The need of a 'game changer'

All our inventions are but improved means to an unimproved end.

Henry David Thoreau

9.1 Introduction

In the previous five chapters, I presented variances of how EDs perceived their work under TEQSA TS. Also discussed were variances of how TEL innovation was experienced generally, and how it was experienced under the TESQSA TS. A number of key findings were discovered from cross-referencing EDs experiences, and which included working within environments that mostly constrain TEL innovation. Also, that the TEQSA TS were not adding to the constraints, rather the constraints were ingrained within the institutional policies and cultures, as well in some cases, being bounded by EDs personal understandings.

Consequently, in this Chapter, the phenomena will be discussed further by drawing on literature, particularly on the subjects of, ED's orientations; the shaping of EDs understandings and; views of transforming TEL teaching and learning innovation. Additionally, with this being a Developmental Phenomenographic study, throughout the discussion I highlight areas where EDs may like to re-consider their approaches and thoughts of TEL innovation generally, and whilst complying with TEQSA TS. Research question four is therefore realised in this chapter.

Reiterating the research approach, it is not the purpose of this thesis to detail the reasons why EDs held varying conceptions, but rather to discuss the variances of understandings and experiences. Accordingly, I discuss the EDs orientations to practice, the key aspects given in the outcome spaces and the social, political and/or economic contexts they inhabit, to uncover understandings and experiences serving to maintain, constrain, support or encourage TEL innovation.

I begin by deliberating on the value of considering TEL innovation as being emergent, to account for its subjective nature.

9.2 Considering Technology Enhanced Learning innovation as being emergent

As was discussed in Chapter one, history has shown that EDs roles have changed over time and that a major force for this has been, inter alia, the increased focus on accountability and quality assurance measures (Bird et al., 2007; Seeto & Herrington, 2006), and effects arising from the growth of the knowledge society. EDs' roles are further determined by the institute's particular wants and needs and shaped by priorities, policies and strategies (see 2.3). Hence, they undertake their TEL work in a variety of ways according to ever changing institutional dynamics. When looking at the experiences and understandings of EDs in this study, it is clear that TEL innovation is conceived subjectively, with perceptions based on the understandings of the EDs and the contexts in which they work (see also 2.2 and 4.3). Further, as was discussed in section 1.2.3, EDs identities have helped to shape how they understood technology (see also Cousin, 2005). As such, EDs consider themselves innovating with TEL to varying degrees and therefore, not surprisingly, innovations being introduced in some universities, were considered 'old hat' by EDs in other universities (Hannan & Silver, 2000). For instance, some EDs had wide ranging and lengthy experiences within the TEL field (see Figure 3.6). In such cases EDs made comparisons to cutting-edge innovations, for example, to those listed in the annual Horizon Reports (See Table 2.1) and elsewhere, which prompted some EDs to say that they were not doing anything 'truly' innovative (for example, see 7.2.1). Conversely, some EDs were relatively new to the profession and did not have much experience. Consequently, more experienced EDs may have perceived TEL innovation as being at a stagnant stage within their university, whilst less experienced EDs may see themselves actively innovating in their context.

Moreover, when looking through the list of examples of innovative technologies and practices given by EDs (see Appendix 4), it is difficult to identify any *radically* new TEL innovative practices or technologies, further indicating what is 'realistically' happening within institutions. The notions above provide clues to EDs and HE institutes in general regarding the difficulty of determining what TEL innovation 'is' in HE contexts. Alternatively, it may be more reasonable to use the term *emerging* technologies and practices, which places the emphasis on the *environments* in which these technologies and practices arise (Veletsianos, 2016). From this perspective, a shift occurs from viewing the technologies as being instrumental, to that of socio-cultural factors influencing technology adoption and use:

> *Even though technology has a significant impact on how education is delivered, managed, negotiated and practiced, the environment in which such impacts occur is influenced by a variety of organisational, cultural and historical reasons – emerging technologies and practices exist in the context of socio-cultural systems, and mature research on their impacts and uses has not yet been conducted (Veletsianos, 2016, p. 22)*

This positioning of TEL innovation as emerging in context provides a more realistic basis from which to further discuss this study's findings.

9.3 The shaping of Educational Designers' understandings

In revisiting Whitworth's (2012) research, the macro or institutional context shapes the micro context or how innovation is practiced, which in turn gives innovation its emergent character (see 2.2.5). How a practitioner understands TEL innovation will also influence what gets done and how it is enacted. In this study, EDs understood TEL innovation as that of teaching and learning being *Maintained*, *Enhanced* or *Transformed* (see Chapter four). Insight into their experiences within institutes, illustrated that of TEL innovation being *Sustained, Constrained or Influenced* (see

Chapter five). When specifically looking at TEQSA TS, EDs had *Static*, *Narrow* or *Broad* perceptions of their work (see Chapter six) and experienced *Maintained, Constrained, Supported and/or Encouraged* circumstances (see Chapter seven).

These contexts, when further probed, reveal a number of key influences. ED's understandings of the contexts and influencers are reflected in their practice of TEL innovation (see Chapter eight), and which are critiqued below.

9.3.1 Sustained/Maintained understandings of TEL innovation

Firstly, this study showed a picture of some EDs, not so much enhancing or transforming teaching and learning, but rather maintaining the status quo. These EDs were not seen to change their pedagogical approach, but rather use technology to replace either non-technological or existing technological processes (see 4.3). Here, EDs understood TEL innovation in simplistic ways, using technologies in new ways; using familiar technology for different purposes; or using technologies in appropriate ways; but without a change in pedagogy. Kirkwood and Price (2014), through their literature review of TEL research, also found that many studies concentrated on TEL as a way of replicating and supporting existing teaching practices, rather than "how university teachers 'teach' and learners 'learn'" (p.26; see also 2.2.2 and 2.2.3). Although recognising the emergent nature of innovation at a local level, at a national or global scale such understandings would not necessarily be considered innovative as there isn't significant change and a transformation of practice (Hannon, 2009). Using technology for technology's sake, or for providing a variety of experiences is not particularly innovative. Rather, as suggested earlier, innovative practice should have high educational value and cause significant positive improvement to teaching and learning practices and outcomes.

Secondly, the shaping of sustained/maintained experiences were influenced by a number of highlighted understandings such as; pedagogy before technology; fit-for-

purpose; best practice and evidence-based practice and; policy, strategy and project led conceptions. Viewpoints prominent in these aspects see technology as being tools for particular use and without thought of them being value-laden. I re-introduce here Feenberg's (2002, 2006) notion that, to ignore the non-neutrality of technology is to risk reproducing the particular hegemony at large, with a loss of a democratic process of designing and developing appropriate-in-context teaching and learning. Hence, it is recognised that technology is not a necessity in all instances and in some cases, will not always produce positive outcomes. However, also considered in this study, is the thought that pedagogy is also value-laden and therefore effects both what is taught and how, and equally capable of producing unexpected and unwanted outcomes.

Following, each of the above ideas are considered critically and related to their shaping forces on TEL innovation.

9.3.1.1 Notions of pedagogy before technology

Many EDs mentioned that there was a need to put pedagogy before the technology, and only then would innovation using technology be considered. Although this practice seems sensible and irrefutable at first sight, I suggest that caution be applied as again, such a statement could view pedagogy and technology as being neutral. Cousin (2005) states that "pedagogies never live independently of prevailing media" and as such "technologies work dynamically with pedagogies, not for them, and in the process they become mutually determining" (p. 118). Both technology and pedagogy could be interrogated further, to "not to ask one to fit or serve the other but to explore overlapping, complementary, conflictual, dynamic movements- each should be changed by the other" (Cousin, 2005, p. 123). Within this study, there was very little mention by EDs of the predominant pedagogy in place in HE. This suggests that EDs should question the overarching pedagogy as well as the technology to determine if they can both help promote better ways of knowing that contributes "to

the social, cultural, economic and political enrichment of the entire society" with HE "[serving] all society, sustaining, enriching, cultivating and critiquing the culture that underpins that society" (McArthur, 2011) (see also 2.2.3).

Pedagogy before technology also suggests that educational technologies, whether new or not, should be used with proven practices and models of teaching rather than trying to either create or refresh pedagogies (Beetham & Sharpe, 2013). Hence, by asserting that pedagogy comes before technology, EDs are saying that technology cannot alter "the fundamental truths about how people learn" (ibid.), thus limiting ideas about ways that technology can possibly transform learning and teaching, especially in an increasingly digitalised world. Alternatively, it is possible for technology to come before pedagogy, and that it may positively change the way we teach and learn by "expand[ing] opportunities and capacity for learning" (p. 119). What's more, it is given that both learner needs, and opportunities created by technology to support needs change over time, as does the way they interact. Accordingly, "[e]ffective learning can only be sustained by a proactive pedagogy, working creatively with technology" (Thorpe, 2012, p. 13). With this in mind, EDs should strive to be (or remain) creative and experiment with technologies, testing a variety of ways they can be manipulated, rather than repeating traditional educational practices. The value for doing so should also be communicated with managers, especially when EDs are employed within projects, as often experimentation and play is not factored into the scope of projects (see 9.3.1.4).

9.3.1.2 Notions of fit-for-purpose

Many technologies were said to be innovative if they were fit-for-purpose (see s 4.3.2 and 4.3.3) Indeed, even TEQSA TS and ACODE suggest that technologies should be fit-for-purpose (see 2.2.4). Fit-for-purpose implies that the technologies are good enough to do the job they were designed to do (Fit-for-purpose, 2017). Being considered fit-for-purpose may be a justified reason in itself for choosing technology

however, as has been stated before, technology is value-laden and its use may introduce new limitations and unintended consequences (Selwyn, 2016). Fit-for-purpose technologies do not guarantee an improvement in teaching or learning, and certainly, if teaching and learning practices don't evolve, there may not be a need for EDs to innovate with TEL at all. Championing fit-for-purpose also doesn't facilitate a critique about what tools and techniques are best able to leverage learning (Lancios & Phipps, 2015), with perhaps unquestioned technologies being used in ways that continue educational inequalities or disadvantage to some learners. EDs should therefore explore both the technology and the pedagogy it is perpetuating, and vice versa. Without this, EDs are further constrained in the sense that, although they may have a say in what works, it is the more powerful members of the institute who get to say what matters (Selwyn, 2016).

As has been previously discussed, HE is finding it difficult to keep up with the rate of global innovation (see 2.3). With some EDs viewing innovation as doing the same things differently with technology, or in improving teaching and learning but not necessarily the pedagogy behind it, an opening is made for discussions about what this view does for maintaining or constraining innovation. This is not to say that all institutes should be innovating at the same rate, but opportunities can be created for discussing how decisions about TEL innovation are made, and what that means for EDs whose work should not be not just be supporting, but improving teaching and learning.

For instance, as was also mentioned by several EDs, there is often a lack of ongoing evaluations of existing educational technologies, regarding their continued purpose and educational value (see 4.4.4). The original fit-for-purpose justification, it seems, is often not questioned once established. As was mentioned in 2.3.2, for cost efficiency purposes, institutions often want expensive, pervading technology to have a long life. However, I refer to Grimes and Feenberg (2013) in cautioning that such

systems may be mainly serving interests and concerns of the institute but not of the academic or student body (see also 2.3.1). In an evolving world, one would have to question whether the expense alone is enough to justify the technology's unquestioned continued use. Further, that the purpose of HE, and its overt focus on economic growth perceived for our Nation's advancement, does little to account for the continuing social inequalities and injustices that are promoted by such an outlook. What is needed is more critique of the factors that underpin the purpose of HE and a democratic process of design and development of technologies in use for teaching and learning. At the very least, a push for ongoing evaluation of such technologies by EDs is suggested.

9.3.1.3 Notions of best practice and evidence-based practice

EDs also talked about 'best practice', that is, choosing TEL tools or practices based on what the field determines as best practice. Ross, Bayne, Macleod, and O'Shea (2011) refute this concept, as they say teaching and learning can be done successfully in many ways. This belief is particularly pertinent when considering the variety of innovations at varying stages of implementation in institutions, and with EDs having varying levels of understanding of TEL innovation. There are also different models of TEL best practice, for example, the TPAK (Koehler & Mishra, 2009) and SAMR (Hamilton, Rosenberg, & Akcaoglu, 2016) models, to name just a few. Each has its own meaning and purpose, and each will steer TEL in directions that may not be presupposed by those who use them. The point is that educational technologies need to be thoroughly critiqued by those that understand the context in which it is expected to be used. In this way, there is a better chance of it succeeding with its educational purpose.

Equally, evidence-based practice, if it becomes a totalising requirement is troublesome:

> *On the research side evidence-based education seems to favour a technocratic model in which it is assumed that the only relevant research questions are questions about the effectiveness of educational means and techniques, forgetting, among other things, that what counts as 'effective' crucially depends on judgments about what is educationally desirable. On the practice side evidence-based education seems to seriously limit the opportunities for educational practitioners to make such judgments in a way that is sensitive to and relevant for their own contextualized settings (Biesta, 2007, pp. 5-6).*

Of course, it would seem sensible to base practices on evidence of what works, "but another reading can be produced if we understand evidence-based practice as a product of new managerialism and as no more than a means of implementing managerialist agendas" (Davies, 2003, p. 98) (see also 2.3.2). However, TEL practice, as is any educational practice, is complex, contextually-based and continually changing in reaction to continuing changing teaching and learning situations:

> *If…[educators] are presented with 'research findings' and policy traditional*
>
> *s as a guide to practice, along with a range of surveillance strategies to monitor their performance, there can be no assumption of a straightforward link between research and practice. Nor can we assume there should be—that the experimental research that is deemed to be relevant would, if acted on, lead to better teaching. Evidence-based practice's preference for experimental evidence reveals either a naivety about research, or a hidden, managerialist agenda that has little to do with research findings and their implications for practice (Davies, 2003, p. 100).*

Again, the question arises that asks not only what works, but also what is it working for, and who has that say (Biesta, 2007). Also of concern is the privileging of research evidence over evidence from other sources, including professional experience (Hammersley, 2001). As suggested by Biesta (2007), when there is emphasis on evidence based research as being the source of what gets done and how, it limits opportunities for EDs to make judgement about what is educationally desirable in particular situations. It also discourages practitioners to investigate areas outside that which is evidence-based and instead, focus on than the tracking and replication of practices deemed successful (Davies, 2003).

9.3.1.4 Notions of policy, strategy and project led TEL innovation

EDs considered policies; strategies and projects as being beneficial to TEL innovation, particularly when considering TEQSA TS (see 5.3.3 and 7.2.3). As has been already mentioned, projects may be viewed as being supportive because of (at the very least), the added authority formal projects give to EDs and the adequate resources that are allocated to such projects. Elsewhere too, projects for assisting academics have been seen as successful (Obexer & Giardina, 2016). This seems to support Cowan's (2008) statement that innovation is possible as long as it is determined within existing structures (see 1.2.1). However, policies, strategies and projects can also limit an ED's, practice and hence constrain TEL innovation.

Indeed, more recently Winslett (2016) found that Australian HE policies give EDs cues to innovate, but these cues also point to the need to do so with existing resources, approaches and infrastructure (see 2.3.2). This situation is problematic when EDs need to decide "between innovating or operating as 'business-as-usual'…[as] the strategic plans do not provide [EDs] with clear direction" and that "[t]hese colliding cues may have an adverse impact on the agency, advocacy and relationship building [EDs] require to be effectively" (Winslett, 2010, pp. 544, 546).

A way to counteract the overriding potential of policy that serves to direct and bind TEL innovation is to start questioning the ability of policy to make effective and innovative change in teaching and learning. Gunn (2013) posits that universities will also need to respond to their changing environments and calls for synergies between innovators and institutions and the development of common ground to enable ongoing innovation. To assist senior managers, EDs can offer advice and suggestions so that all contribute to "strategic decisions about how to draft policy, create role descriptions and shape appropriate cultural change programmes" (Shurville et al., 2009, p. 218), which additionally may provide clear direction of how EDs can interpret such policy in work situations.

9.3.2 Supporting and encouraging EDs to innovate with technology

Literature shows a disappointing ambivalence towards EDs and the competencies and knowledge they have regarding TEL that discourages TEL innovation (see Hannan, 2005 and 2.3.3). This perspective was also mentioned by several EDs, who expressed their frustration with such attitudes (for example, see 5.2.2; 6.2.2 and 7.2.2). Instead, a supportive environment, where EDs innovative work is actively encouraged and their knowledge and skills are valued, will nurture TEL innovation (Hannan & Silver, 2000). Certainly, in this study several EDs said that they were able to innovate because of a supportive manager or institutional framework, such as a project, to work in.

EDs should nevertheless, be aware of the new managerialism approach, and its assumptions and mechanisms that block organisational and cultural change (ibid.). Rather, it is suggested that EDs engage and share new dialogue on the possibilities of TEL innovation across either established or within a more specialised network of EDs (Shurville et al., 2009). This may be through establishing communities of practice both within and amongst HE institutions and other relevant people (see also Uys, 2010). Within these communities of practice, "[c]riticism of institutional systems

can be aired in open channels, and so can discussion of [TEL] innovations and pedagogical strategies that are being tried out in different parts of the institution" (Uys & Gunn, 2012, p. 4).

Further necessary is for EDs to "collectively document and communicate their own ongoing professionalization" and to use specialised networks to "ensure ethical and professional practice is maintained" (Shurville et al., 2009, p. 218). This will also go some way to evidence professional development and achievements to inform career development.

9.4 Transforming TEL innovations

A. W. Bates and Sangra (2011) and Laurillard (2008a) assert that using innovative technologies are not sufficient for what is required by learners in a twenty-first century (see 2.2. and 2.3). The knowledge and skills needed today, and for the future, require curriculum reform with not only the necessary changes in content but also a re-think on the pedagogy behind teaching strategies, methods, and assessment (see 2.2.3). The purposes of education should therefore be re-evaluated, with "genuine disruption [involving] rethinking the very nature of education: its activities and relationships as well as its core purposes and values…genuine disruption is not about doing the same things differently, but using technology to do fundamentally different things" (Selwyn, 2016, p. xvii). Such changes will most likely involve risk, and as several EDs mentioned in their interviews, generally universities are reluctant to take risks. This risk is perceived more so when educational technologies pervade the institute, and staff become dependent on them so even as technologies improve, it is not a given that institutes update in line with these improvements. Instead, EDs are often left to do the best they can with what is available (see also 9.4.1.4). When we look at the issue in this way, revealing is that challenges of innovating with technology come more directly from inside the institute,

rather than being imposed by external forces, that is, it is the challenge created by the internal structures of power that create impediments to change. Hence, for change to occur one suggestion is to again look towards communities of practice "where risk taking is encouraged by the knowledge that others may be exploring similar opportunities" (Uys & Gunn, 2012, p. 4).

Secondly, there could be greater efforts made towards the involvement of partners and interest groups outside of institutions in innovation. The reason is because without doing so, focus may be on the risks and constraints associated with new technologies rather than on experimenting with pedagogy (Selwyn, 2016; Vince, 2015).

Further, Whitworth and Benson (2007) suggest that creativity has to be valued if universities want to retain their ability as organisations to innovate. Good reason for enabling creativity to flourish is because technologies of the past have not necessarily been taken up or used in the ways originally intended (Conole et al., 2007), and hence there is justification for continually being innovative with technology. When the several EDs mentioned how they were encouraged to innovate, they also indicated that it led to new ways of supporting teaching and learning (for example, see 5.3.4 and 7.2.4.). It was also suggested that those opportunities were allowing for the possibility of other innovative teaching and learning ways to organically grow.

Additionally, *individual* innovators should be encouraged to work on creative solutions to the problems posed by new developments in TEL, as those working centrally and on strategic projects cannot easily do so. This would mean providing individuals with resources, such as funds, to do so. It is recognised though, that funding for individual activities would have to be carefully conceived as there is need to find "a balance that will support rather than stifle innovation, and allow the

experience of exploratory work at grass roots level to inform later developments and influence strategic initiatives" (Uys & Gunn, 2012, p. 3). Consequently, EDs could be encouraged to disseminate their research and in doing so, contribute to an ED knowledge base (Whitchurch, 2009).

Whitworth and Benson (2007) also state, and which was also alluded to by EDs in this study (for example see 5.2.1), that "[w]e learn about [TEL] best in teaching settings – which by definition, administrators and developers do not enter" (p. 10). A much closer relationship between EDs and teaching and learning situations than EDs typically experience would help with EDs keeping both in touch with these kinds of situations and the current TEL technologies available (D. Gibbs & Gosper, 2006).

Although clarification of titles and roles would support effective relationships and contribute to EDs being "valued, supported and empowered to make significant contributions" to TEL innovation (Mitchell et al., 2017, p. 150), EDs are also advised to "be prepared for a constant re-definition of the role's scope of work and competency requirements" (Obexer & Giardina, 2016, p. 143). This will therefore require EDs to undertake continuous professional learning (Bird et al., 2007; Obexer & Giardina, 2016; Uys, 2010) and for their institutes to support them with such opportunities. For those that wish to work more in the academic arena, they could also be given more flexible work arrangements and conditions to enable the building of a portfolio to showcase work (Whitchurch, 2009). To further reinforce the important role of EDs, it is proposed that EDs should request that their roles be regularly re-examined. EDs could also champion for their institutions to create sustainable career and organisational structures to support successful TEL engagement. (Shurville, Browne, & Whitaker, 2008). However, it will also be necessary, Browne and Beetham (2010) assert, for institutes to facilitate and strengthen academic and ED partnerships, and to establish institutional frameworks to enable EDs to flourish within their roles.

Further De Freitas and Conole (2010) have noted the need for new pedagogical models to help guide the design of effective innovative teaching and learning and that these are more socio-cultural than technological. Beetham and Sharpe (2013) have said that most of the technologies used for education are based on what we already know and understand (see 2.2.3). They state it is time to start "tackling the really difficult problems presented by our ambitions for universal and effective education" as imaginative uses of technology could transform teaching and learning (p. xvii). There is a need of both a top down and bottom up approach with practitioners experimenting and creating, and strategies that change educational structures and processes (ibid.). What is now required is a "game changer", some fixing of the system and some disruption. These:

> *…are not value-free extrapolations of neutral technology innovation…[they are] linked to the wider agenda's, beliefs and interests about education reform and broader societal change…[recognising] the corporate, commercial and economically driven nature of the prevailing talk of disruption and de-institutionalisation (Selwyn, 2016, pp. xvi-xvii).*

As such, technology cannot but influence the ways in which people learn and therefore what makes for effective learning and effective pedagogy. It is the emerging contexts that need further deliberation and scrutiny, including the perceptions of EDs as they go about their innovative TEL work. The challenge for the university is in recognising the varying ways in which people learn in a digitally connected world and the corresponding need of transformational pedagogy in HE. Moreover, that this will require changes in structures, policies and practices to assist transformation:

> *New organisational models and ways of working are required to meet changing social and economic circumstances and to reflect the*

affordances of the current raft of new technologies (Gunn, 2014, p. 404).

Throughout this section, I have remarked on the need of EDs to experiment, create and research to ensure that TEL innovation is contextually appropriate and enables teaching and learning to occur in ways that are socially just and equitable. However, Stiles and Yorke (2006) have noted the problematic relationship between experimentation and innovation and that of central control, and have found that such a relationship is not well understood in educational organisations. Importantly, as EDs engagement in research on teaching and learning in general has been declining over time (see Gosling (2008) and Jones, 2012) (especially if EDs are not categorised as an academic) it is not surprising to see that there are few published accounts of TEL practices that show evidence of a scholarly approach to university teaching (Gosling, 2009; Kirkwood & Price, 2013b). This may prove disadvantageous to innovation and hence, Obexer and Giardina (2016) suggestion that research engagement be promoted through collaborations with academic staff and other support staff. There may also be scope for EDs to "[play] an expert role in the support of academic e-research, drawing upon knowledge gained from supporting curriculum developments and prior e-learning research experience" (Peacock, Robertson, Williams, & Giatsi Clausen, 2011, p. 115). Additionally, that it would be beneficial for an ED to be both practitioner and researcher as such multi-skilled roles would lend strength to the ED profession (Peacock et al., 2011).

9.5 Conclusion

Although I have promoted the use of technology to transform learning, I also acknowledge Feenberg's Critical Theory of Technology and the embodiment of technology within society. Accordingly, TEL and its use are understood in social, economic and political contexts. The value of TEL lies with the uncovering of aspects such as power and control, inequality and democratisation, participation and

marginalisation (Feenberg, 2002; M. Johnson, Smyth, & Hall, 2011; Säljö, 2010) and how such factors can shape and direct what gets done, how and by whom. Also suggested is the recognition of the complexities of context, the differing perceptions of EDs and other stakeholders and the understanding that technology is value-laden. These principles should be at the forefront of any endeavour to innovate with TEL.

In the final chapter following, I re-visit the aim of the study and summarise some of the key points made throughout the thesis. I also re-examine the research questions and maintain that they are satisfactorily answered. I also look at limitations of the study and finally; suggest directions for future research.

Chapter 10: Review of the Research and New Directions

We cannot change what we are not aware of, and once we are aware, we cannot help but change.

Sheryl Sandberg

10.1 Introduction

This study on the variances in ED understandings and experiences of TEL innovation was motivated by my experience and interest in both TEL and the work of EDs with innovation in HE. Particularly, I had an interest in looking at improving teaching and learning using technology and, in response, to research that technology is changing both what we need to know, and how we come to know it (Bates, 2010; Laurillard, 2008b). Further, having worked in ED contexts, I have seen firsthand how they often struggle, within their roles, with work with faculty and management, and with that of improving teaching and learning with technology given other institutional constraints. The rhetorical importance given to technology for teaching and learning in many policies and strategies, compared to the struggles that EDs experience in practice, prompted a study to better understand how EDs went about innovating with TEL, especially in this compliance driven age. Overall, my findings revealed a HE environment that serves to mainly constrain TEL innovation, particularly that of improving pedagogy. In many cases, EDs are being directed to work within given institutional frameworks and to use that technology which is already established and 'known'. However, this was much the case before TEQSA TS came into the picture, and cannot therefore be limiting in itself at this early stage of TS implementation.

In this final chapter I firstly re-visit the use of Feenberg's Critical Theory of Technology that underpinned the study to review its usefulness and discuss its value for the study outcomes. I then return to the study's original four research questions and give direct answers to each. I also outline how the study contributes to the field

of researching TEL innovation and, its limitations. Finally, I suggest future research directions arising from this study and give concluding remarks.

10.2 Use of Feenberg's "Critical Theory of Technology"

I believe that Feenberg's 'Critical Theory of Technology' has served a useful purpose as was initially proposed in section 1.4, that is, to not take technological problems and solutions at face value and in supporting the view that TEL innovation can be supported or constrained by socially constructed issues related to empowerment, social justice, equality and democracy. Consequently, it provided theoretical support for this study, which moved away from a 'means-end' way of looking at how best to use technology to enhance learning, to focussing on how innovation in TEL is carried out in educational contexts (see 1.4). I believe that EDs can examine exposed understandings and experiences shown by this study and recognise that their TEL work may be overtly influenced by local, national and global socially produced values and principles. Use of this theory coupled with developmental phenomenography has extended understandings of how a proportion of EDs across Australian universities perceives and experiences TEL innovation, with perceptions and experiences arranged hierarchically. This was a deliberate approach to depict the more powerful and developed understanding and experience higher in the than the lesser advanced lower down understandings and experience. Further, use of the Critical Theory of Technology has provided an opportunity for EDs to think more consciously about technology and its uses and to question hegemonic and biased strategies that reproduce the 'status quo' or stifle innovativeness. Further, in knowing that technology and its uses may be positively influenced by democratic processes of design and development (Feenberg, 2006), EDs are encouraged to take a proactive stance and campaign for more democratic and transformational choices and uses of technology.

In the next section, the major findings and impressions that were revealed from this study are summarised.

10.3 Summary of findings

By doing this research my aim was to illuminate how EDs both understood and experienced TEL innovation. I also intended to understand how TEL innovation was experienced under TEQSA TS. Lastly, I wanted to present information and ideas gained from this study to inform Educational Designers and the TEL innovative work they do. I asked four research questions and am confident that I have successfully managed to present findings in answer to these:

1. How do Educational Designers understand TEL innovation?
2. How do Educational Designers experience innovation with TEL?
3. How is TEL innovation experienced under the TEQSA Threshold Standards?
4. What information and ideas gained from this study can inform Educational Designers and the TEL innovative work they do?

Below is a summary of the findings as related to each research question.

10.3.1 How do Educational Designers understand TEL innovation?

- The varying understandings that EDs had of TEL innovation ascend in a hierarchy from that of Background understandings, Alternative understandings, Suitability understandings, Quality understandings, and, Fundamental change understandings. These understandings were discussed as according to five varying structural aspects, that is EDs had: Inconsequential, Simplistic, Determinist, Appraised and, Visionary understandings of TEL innovation.
- Within each CoD I explained how the structural aspects framed how the ED understood TEL innovation. The referential aspects in this outcome space

helped show the variances between the CoDs, namely that of EDs having Maintained, Enhanced or, Transformed understandings.

- The variations of understandings of EDs about TEL innovation vary from TEL innovation as not important for improving learning to; learning being improved by innovations in TEL, to; learning being transformed by innovations in TEL.

10.3.2 How do Educational Designers experience innovation with TEL?

- EDs experiences of innovating with TEL vary and also ascend hierarchically from that of not being able to innovate, to innovating opportunistically, innovating by being directed by others, and lastly, being self-driven to innovate. These were discussed as according to five structural aspects, talking an: Inactive stance, an Active stance and, Taking charge aspects.
- The referential aspects in this outcome space helped show the variances between the CoDs namely EDs had Sustaining, Constraining or, Influencing experiences.

10.3.3 How is TEL innovation experienced under the TEQSA Threshold Standards?

- EDs' experience innovation under TEQSA TS according to four different categories of description and ascend in a hierarchy from that of a; Status quo, Piecemeal, Pre-planned and, Propagated experience. These were further influenced according to three structural aspects: Enduring, Considered or, Speculating aspects.
- The referential aspects in this outcome space helped show the variances between the CoDs, namely EDs had Maintained, Constrained, Supported, or Encouraged experiences.

10.3.4 What information and ideas gained from this study can inform Educational Designers and the TEL innovative work they do?

Although I was non-judgemental in my analysis of the data, the developmental nature of this study required an outcome that would be in some way useful to the ED community. With that in mind I took the Critical Theory of Technology perspective and attempted to unpack contexts, understandings and experiences, and to be constructively critical of them, to show an alternative way of seeing and doing. In doing so I hope that the research has helped to uncover conditions that facilitate the transition from one way of thinking to a qualitatively 'better' perception of 'reality' (Marton, 1986).

As such, the main ideas that may inform EDs and the TEL innovative work they do are outlined below:

- As a general finding, rather than viewing TEL innovation in HE contexts as possible to define, TEL innovation should be viewed as emerging from the context and environment within which it sits.
- Without movement of understandings from that of being something new or different without a change and improvement in pedagogy, to the transformation of teaching and learning with technology, there will be little TEL innovation required of EDs.
- To move TEL innovation forward, there is need of questioning the notions of 'pedagogy before technology', 'evidence-based' and 'best practice' that permeate EDs' dialogue.
- Experience of TEL innovation is influenced by both EDs understandings and the contexts within which they sit. However, the institutional context also has influence on how EDs innovate with TEL. Roles and responsibilities are often not clearly defined and communicated within and across HE. Thus, the unclear role and related functions and operations of that role can serve to undermine the position of EDs.

- However, EDs should also aim to continuously grow via professional learning by updating knowledge and skills and to embrace the dynamic TEL environment in which they work. Institutes should be encouraged to regularly re-examine ED roles in response to this changing environment.

- TEL innovation can occur (to varying degrees of innovativeness) by EDs that have either narrow or broad views of roles under the TEQSA TS. This suggests that it is not the view of TEQSA TS that guides innovation. Also, those with boarder views were also maintained or constrained in their efforts to innovate and hence, internal pressures may be more influential than what is possible as stated by external bodies.
- TEQSA TS did not place any additional constraints on TEL innovation and that generally it was the understandings and contexts within which EDs sit that are the main influencers to any TEL innovative practice. However, these micro-contexts also sit within a macro-context, which is the more complex HE environment, and which also exert influence due to dominant knowledge economy perspectives and effects from a globalising world.

- With risk adverse institutes, EDs are often left to do the best they can with what is available (see also 9.4.1.4), again indicating that challenges of innovating with technology come more directly from inside the institute, rather than being imposed by external forces. These challenges are more socio-cultural than technological and include such things as internal structures of power, which create impediments to change. It was suggested that EDs have time allocated for experimenting and creating with technology and for them to get involved with communities of practice to support one-another and share practices of TEL innovation.

10.4 Contributing to the TEL innovation research field

In terms of implications for EDs and the TEL HE field, the data was collected in 2015/16 and the intention was to provide a view into the EDs varying understandings and experiences at that time. However, it offers robust accounts of ED's work with TEL innovation in HE settings, and of which I hope EDs can relate to now and in the near future. I propose that TEL innovations be seen as emerging out of the environments (as shown by the EDs understandings and experiences) in which they occur, and that they will, in turn, shape future TEL innovations. Hence, it may be time to disrupt doing things based on what we already know and understand, and to look to transform learning.

As was mentioned in section 1.6, I have not found any research on how EDs experience TEL innovation generally, or under TEQSA TS and within Australian contexts. There have been studies on, or involving EDs (and similar positions), TEL, TEQSA, and on innovation, but none that combines the four elements in the same way (or in fact in any way) that I have. The developmental phenomenographic research approach, and lens of Critical Theory of Technology used, also adds to its uniqueness and provides a useful way of looking at the research.

I have provided new knowledge on how EDs understand TEL innovation, and which revealed three possible ways (maintaining, enhancing or transforming). This knowledge points to a need of EDs to deliberate on the more 'advanced' or 'better' ways of understanding. Additionally, the analysis and related literature point to a need of EDs to look at other more imaginative uses of technology to transform learning and of developing new pedagogical models, however with a mindset that their work is often more socio-culturally then technologically constrained.

New knowledge has also arisen from the discovery of the variety of ways that EDs experience TEL innovation in their contexts, generally, and under TEQSA TS. This

has seen TEL innovation remaining at a status quo level, or being constrained, supported or encouraged. Furthermore, that a narrow or broad view of their work under TEQSA TS did not necessarily affect how they experienced TEL innovation. It has also shown that TEL innovation can be supported under TEQSA TS, albeit as long as it remains within the institutional frameworks. Such findings provide a holistic picture of what is happening with TEL innovation at Australian universities. In this regard, influences on TEL innovation is pressured more so by internal rather than external factors, and hence from a combination of the awareness of EDs about the different stages of learning (see 2.2.3), and the way that institutional social and political environments shape TEL innovation possibilities.

Finally, by providing a critical perspective of technology, pedagogy, EDs and HE, I also hope to encourage others to contribute to a growing number of alternative ways of looking at TEL innovation in HE.

10.5 Considerations of study's limitations

Within the study, I have endeavoured to be clear about the theory behind my thesis, the research processes used to gather and analyse data and in critiquing phenomenography (see section 3.5.1). This will enable readers to determine if there is enough evidence to assess the trustworthiness of the research findings and the conceptual underpinning of these methods. I've also tried to stay true to the idea that it is the totality of ways in which people experience the phenomenon that is the focus of a phenomenographic study, with Marton & Booth also stating that this can be "at least, a subset of the totality that is pertinent and accessible for the sort of people being studied" (1997, p. 121). However, I note that I involved EDs in eleven of the forty universities across Australia. Also, that I was only able to work with one of the six universities that had the higher numbers of students studying off campus (see 3.4.2). Nonetheless, I believe the outcome spaces generated by the twenty-six

participants could be considered as more or less accurately representing ED understandings and experiences “at [that] particular point in time, for the population represented by the sample group collectively” (Akerlind, 2012, p. 116).

Further, because of the word limitations this thesis imposed, I was not able to discuss in great detail the referential and structural aspects of each outcome space. Although they appeared quite straight forward and hence possibly did not require lengthy discussion, I would have liked to give more detail and illustrative quotes to support each structural and referential aspect. Nonetheless, the comprehensive data gathered by the research process will provide opportunity to produce several more research papers for publication in the coming year.

This research was not part of any university project or strategy which meant that there was little opportunity to involve colleagues in any part of the research process. At the very least, I would have liked research colleagues of mine to be involved in checking the categories of description and outcome spaces, however this was not possible because colleagues were not familiar with the Developmental Phenomenographic approach. To become so would have taken considerable time and effort. This inability initially had me nervous about whether I was looking for the ‘right’ aspects of understanding and experiences. I was reassured however by Akerlind (2005b) point that “there are more or less complete outcomes, not right or wrong outcomes" (p. 70). I hope my attempts of showing rigour and trustworthiness outlined in section 3.6 has also supported the study in this regard.

Finally, I again mention that there will be difficulty for other researchers to replicate results found in my study due to researcher’s differing interpretations of understandings and experience (Burns, 1994; Säljö, 1997). Instead I leave the appraisal of trustworthiness up to the EDs and other researchers to recognise the

conceptions presented in the categories of description and the overall findings illustrated by the outcome spaces (Marton, 1986, 1994).

10.6 Future directions for research

Within this study I have mentioned areas that other authors have mentioned as needing further research to support knowledge building in the areas of transformation of teaching and learning; TEL innovation and in understanding EDs role in both. I outline what these were, and include additional areas that my study has prompted.

In response to Price's (Kirkwood & Price, 2013b) research results on TEL practice, EDs should endeavour to undertake more scholarly research and to look to have it published. As was discussed in section 2.3.3, Price and Kirkwood (2016) recently stated that pedagogy was often poorly connected to technology, which creates gaps of distinguishing between pedagogy for improving learning and that of technology for improving learning. There is a further need of investigations into how uses of technology affect what is valued in terms of knowledge, and what it means to know and learn. This will help to confront the idea of pedagogy before practice and in doing so, open up opportunities for dialogue on new pedagogies and practice.

There is also need of research specifically into the areas of EDs' roles and their influence on what gets done at universities. This is in response to EDs in this study indicating their frustrations with roles and constraints they experience when trying to innovate with TEL. It is also mentioned because of Obexer and Giardina's (2016) assertion that EDs are key collaborators, accelerators and connectors (see 1.2.3). I would suggest that, although this may be what is wanted within roles, what happens on a daily basis may not reflect these positions. Research could include, how others view the ED role, including academics and other faculty they work with, the professional staff they collaborate with and through to middle and senior management who supervise and guide their work. Such an investigation will help

clarify not only how others see their roles and responsibilities, but what needs further doing to support their 'change agent' status.

Lastly, I would suggest research into how partnerships with external bodies can assist TEL innovation, specifically in creating 'safe', less risky places for experimenting and creating with technology and pedagogy, and what role EDs could play in this partnership. However, to do so I suggest the institute would need to clarify the purpose of the innovation for transparency sake.

10.7 Final remarks and reflections

Looking back, I realise that I may have not appreciated the importance of such a study to the ED field and HE in Australia. Only once the thesis came together as a whole, did I begin to truly understand the interconnectedness of overarching concepts and phenomenon such as the digital world, HE's values of knowledge and shaping forces from perceptions of a knowledge-based economy and society. So many hidden or disguised ideas and forces began to appear like a 'miasma of doom' that I often felt anxious about my own and future generations. However, having gained knowledge of the different ways of viewing technology, and a belief in a Feenberg's Critical Theory of Technology, I remind myself that technologies are just frameworks for ways of life. In this way I believe society can continue to be advanced if we do not take technology and its uses at face value, and instead commit it to more critique and demand a more democratic processes of its design and development (Feenberg, 2006).

My final remarks and reflections are therefore buoyed by the knowledge that I intend to continue researching EDs and their TEL innovative work, due largely to the rich data I collected but was unable to discuss here. Because of this richness, there were many other research trajectories I could have taken, and I feel myself being drawn further into the field of EDs and their central roles of improving teaching and learning.

However, I feel that I have done justice to the four research questions presented at the beginning of this study, and thus am satisfied with the thesis from that point of view.

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Appendix 1 Interview Questions

1. First, by way of context, can you tell me what your current position is and about what work you do in this position?

2. Please tell me what innovation in Technology Enhanced Learning means to you.

3. Based on your experiences, what innovative work have you recently done involving TEL?

4. Can you give me a concrete example of your innovation with TEL?

Or

Why has innovation not been possible?

Or/and

Why did you do it that way?

Or/and

What were you hoping to achieve?

4. Do you envisage what you're doing to innovate changing over time?

Why/Why not?

5. This raises the issue of working within the premises of TEQSA Course Provider Qualification Standards. Can you tell me, what does innovation in TEL whilst needing to comply with the TEQSA standards means to you?

6. Can you give me a concrete example of something you've done to innovate with TEL but still comply with the TEQSA standards?

Or

Why has innovation not happened?

Or

How did you go about that?

Or/and

Why did you do it that way?

Or/and

What did you learn from the above process?

Appendix 2

Participant Information Sheet

Department of Educational Research
County South, Lancaster University, LA1 4YD, UK
Tel: +44 (0) 1524 592685

LANCASTER UNIVERSITY

Participant Information Sheet

Title of Project: Educational Technologists' insights into Technology Enhanced Learning Innovation in Higher Education Institutes in Australia.

Researcher: Georgina L Avard

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*Date:*_____,

Dear

I would like to invite you to take part in my thesis research with the Centre for Technology Enhanced Learning in the Department of Educational Research at the University of Lancaster.

Before you decide if you wish to take part you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

This document includes:

- Information about the purpose of the study (what I hope to find out).
- Information about what participation means and how to withdraw when and if you wish (what you will be doing).
- Details of what notes, recordings and other sources of information may be used as 'data' in the study - for the group and with you as an individual.
- Information about how this data will be secured and stored.
- Information about how any quotes will be used and how you will be involved in checking, agreeing and consenting to their use.
- How the information will be used in the thesis and for other purposes such as conference proceedings, presentations or publication.

1

Department of Educational Research
County South, Lancaster University, LA1 4YD, UK
Tel: +44 (0) 1524 592685

The purpose of the study

This research is for my thesis on the PhD in Technology Enhanced Learning programme with the Centre for Technology Enhanced Learning in the Department of Educational Research at Lancaster University. The research may also be used for journal articles and conference presentations.

My research aims to find out the range of ways that Educational Technologists perceive innovation in TEL and how they experience this whilst needing to comply with the Australian Tertiary Education Quality and Standards Authority (TEQSA) Provider Course Accreditation Standards. I hope to gain an illumination of what Educational Technologists know and understand about innovating under the TEQSA requirements and the possible ways of thinking of innovating in such circumstances. This research will provide insight to inform the work of Educational Technologists and those who provide support to them about the possibilities of improving TEL innovation.

What participation involves and how to withdraw if you no longer wish to participate

Why have I been invited?

You have been invited because you are an Educational Technologist/Educational Developer working with Technology Enhanced Learning within an Australian University that has large numbers of online students.

Do I have to take part?

No, your participation is entirely voluntary. If you do not wish to take part, then please let me know. If you do not wish to be recorded, please indicate this. Every effort will then be taken to ensure that your data/voice is removed from recordings by editing out where possible or excluding such data from any transcription.

You can withdraw at *any* time during the study and there is absolutely no obligation on you to continue nor penalty for withdrawing. Your related data (recordings, notes) can be destroyed and all reference removed at any time.

Withdrawing from the study: There is a cut off point for when you can withdraw from the study. This will be up to two weeks after your date of interview. After this date data will still be included in the study but no extracts will be used within the research write up, journal articles or any conference presentations.

What would taking part involve for me?

As a participant you will be asked to participate in a single interview. This interview will take up to 1.5 hrs in length. You will be given a copy of the interview questions via email a week before the interview. If I need clarification on your responses I will ask follow up questions to aid my understanding and to draw out information related to the questions asked. I may also ask you to read through sections of my discussions for your impressions on findings. This will be on a totally voluntary basis.

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What will I have to do?

I ask that you schedule a full 1.5 hrs for this interview. I also ask that you respond to my interview questions as truthfully and as in depth as you can manage.

Protecting your data and identity

What will happen to the data?

'Data' here means the researcher's notes, audio recordings and any email exchanges we may have had. The data may be kept for ten years after the successful completion of the PhD *Viva* as per Lancaster University requirements, and for use in any publications. After this time, any personal data will be destroyed. Audio recordings will be transferred and stored on my personal laptop and deleted from portable media

Identifiable data (including recordings of your and other participants' voices) on my personal laptop will be encrypted. With devices such as portable recorders where this is not possible identifiable data will be deleted as quickly as possible. In the mean time I will ensure the portable device will be kept safely until the data is deleted.

Data may be used in the reporting of the research (in the thesis and then potentially in any papers or conference presentations). Please note that if your data is used, it will not identify you in any way or means, unless you otherwise indicate your express permission to do so.

You have the right to request this data is destroyed at any time during the study as well as having full protection via the UK Data Protection Act. The completion of this study is estimated to be by February 2016 although data collection will be complete by July 2015.

How will my identity be protected?

A pseudonym will be given to protect your identity in the research report and any identifying information about you will be removed from the report.

Who to contact for further information or with *any* concerns

If you would like further information on this project, the programme within which the research is being conducted or have any concerns about the project, participation or my conduct as a researcher please contact:

Dr Paul Ashwin – Head of Department

Tel: +44 (0)1524 594443
Email: P.Ashwin@Lancaster.ac.uk

Room: County South, D32, Lancaster University, Lancaster, LA1 4YD, UK.

Thank you for reading this information sheet.

Georgina Avard

Participant Consent Form

Department of Educational Research
County South, Lancaster University, LA1 4YD, UK
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LANCASTER UNIVERSITY
Department of Educational Research

Consent Form

Title of Project: Educational Technologists' insights into Technology Enhanced Learning Innovation in Higher Education Institutes in Australia.

Name of Researcher: Georgina Avard

		Please Tick
1.	I confirm that I have read and understand the information sheet dated 22 July 2016 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
2.	I understand that my participation in this research study is voluntary. If for any reason I wish to withdraw during the period of this study, I am free to do so without providing any reason. I understand that my discussion during interview will be part of the data collected for this study and my anonymity will ensured. I give consent for all my contributions during the interview to be included and/or quoted in this study.	
3.	I consent to the interview being audio-taped.	
4.	I understand that the information I provide will be used for a Ph.D research project and may be published. I understand that I have the right to review and comment on the information provided before the final submission	
5.	I agree to take part in the above study.	
Name of Participant: Signature Date		

Participant Background information form

Dear

The following information is needed to support my research on 'Educational Developer/Designers' insights into Technology Enhanced Learning Innovation in Higher Education Institutes in Australia'.

Data collected will not identify you in any way or means, unless you otherwise indicate your express permission to do so.

Pleased complete the following information by ticking the most relevant box:

AGE GROUP:	☐ 20-30	☐ 31-40	☐ 41-50	☐ Above 50	☐ PREFER NOT TO DISCLOSE

I IDENTIFY MY GENDER AS:	☐ Female	☐ Male	☐ Trans	☐ PREFER NOT TO DISCLOSE

NUMBER OF YEARS EXPERIENCE WITHIN THE EDUCATIONAL DEVELOPER/DESI -GNER FIELD:	☐ 0-2	☐ 2-5	☐ 5-10	☐ MORE THAN 10	☐ PREFER NOT TO DISCLOSE

QUALIFICATIONS HELD (more than one box can be ticked):	☐ NONE	☐ CERTIFICATE	☐ DIPLOMA	☐ BACHELOR	☐ POSTGRAD	☐ Other (please list below)	☐ PREFER NOT TO DISCLOSE

EMPLOYMENT STATUS:	☐ FULL-TIME	☐ PART-TIME	☐ CASUAL	☐ OTHER (Please list below)	☐ PREFER NOT TO DISCLOSE

Many thanks!

Appendix 3 Opening statement read to each participant before interview

For my PhD study the aim is to find out the range of ways that Educational Technologists perceive innovation in TEL and how they experience this whilst needing to comply with the Australian Tertiary Education Quality and Standards Authority (TEQSA).

I would like to find out the variations in meaning, and the characteristic ways of innovating under such conditions and circumstances. These I hope will help me provide suggestions for university policy and Educational Technologists' practice to enable innovation in varying TEL environments.

I will ask you a number of questions related to the above aim. I have sent these questions to you beforehand so that you are aware of them and have had time to think about some responses. There are no right or wrong responses so please feel free to respond as you please.

If we go off track I may steer it back on track but other than doing this I will try not to contribute to your responses or offer my opinions mainly because I am interested in your experiences rather than my own. If there is time at the end of the interview I am more than happy to answer any further questions that you have about the study.

Are you OK with this introduction and comfortable with talking with me?

Are you ready to begin now?

Appendix 4 List of TEL Innovations given by Educational Designers

- Academic integrity module
- Augmented reality use
- Badging
- Bespoke tools/systems
    - 3D equipment and software
    - Polling software
    - Scenario-based learning
    - Simulations
    - Student relationship engagement system
    - Virtual world
- Digital toolkit for staff developed
- E-portfolio using e.g.
    - Mahara
    - PebblePad
- ipads/BYOD provided to students
- Learning analytics
- Learning Management System/Tools e.g.
    - Echo 360 active learning platform
    - Linking LMS to library
    - Online learning community
    - Peer assessment tools
    - Pinterest
    - Platform for students to ask questions
    - Quiz tool

- Mind mapping software
- MOOC
- One Drive use
- Online exam authentication software
- Online professional development course about online teaching for staff
- Online website where students can test tools
- Pedagogy e.g.
    - Blended learning
    - Collaborative online peer support/mentoring
    - Mobile learning
    - Use of interactive video
- Physical learning spaces
- Recording lectures and lecture capture
- Researching staffs' use of technology
- Studio and software for staff to create videos
- System for requesting media help
- Virtual reality
- Web conferencing tool e.g.
    - Using Collaborate